



## 9.21 TOWNSHIP OF MENDHAM

This section presents the jurisdictional annex for the Township of Mendham. The annex includes a general overview of the Township of Mendham; an assessment of the Township of Mendham’s risk, vulnerability, and mitigation capabilities; and a prioritized action plan to implement prior to a disaster to reduce future losses and achieve greater resilience to natural hazards.

### 9.21.1 Hazard Mitigation Planning Team

The following individuals are the Township of Mendham’s identified HMP update primary and alternate points of contact and NFIP Floodplain Administrator.

*Table 9.21-1. Hazard Mitigation Planning Team*

| Primary Point of Contact  | Alternate Point of Contact   |
|---|--|
| Sarah Neibart, Township Mayor<br>PO Box 520, Brookside, NJ 07926<br>973-543-4555<br>sneibart@mendhamtownship.org    | Evan Thomas, OEM Coordinator<br>PO Box 520, Brookside, NJ 07926<br>973-769-5467<br>ewt58@aol.com |
| NFIP Floodplain Administrator   |  |
| Denis Keenan, Township Engineer<br>PO Box 520, Brookside, NJ 07926<br>973-543-4555<br>Denis.Keenan@FPAengineers.com |  |

### 9.21.2 Jurisdiction Profile

The Township of Mendham is located along the central-southern border of Morris County and is bordered by Somerset County to the south, the Township of Randolph to the north, the Townships of Morris and Harding to the east, and the Township of Chester to the west. The Borough of Mendham is wholly contained within the borders of the Township of Mendham and is detailed in Section 9.21 (Borough of Mendham). According to the U.S. Census, the Township has a total area of 18.10 square miles, of which 17.87 square miles is land and 0.23 square miles is water. The Township includes the hamlet of Brookside in which are located the school, police, fire, municipal building, community center and post office.

The Township of Mendham is located within the NJ Highlands Region which is an area of 859,358 acres located in the northwest part of the State. The NJ Highlands Planning Act (Highlands Act, P.L. 2004, c.120) provided the statutory authority for the development of the Highlands Regional Plan which established specific boundaries as the Preservation Area and the Planning Area within the Highlands Region with the goal of protecting the natural and cultural resources of the Highlands Region while striving to accommodate a sustainable economy. The fundamental difference between these two areas is that municipal and county conformance with the Regional Plan is required for communities in the Preservation Area but voluntary for those in the Planning Area. The plan provides minimum standards governing municipal master planning, development regulations, and other regulations concerning the development and use of land, including standards for minimum lot sizes and stream setbacks, construction on steep slopes, maximum appropriate population densities, and regulated or prohibited uses for specific portions of the Preservation Area. The Township’s 11,534 acres are located entirely in the Highlands Planning Area.





According to the U.S. Census, the 2010 population for the Township of Mendham was 5,869. The estimated 2017 population was 5,877, a 0.1 percent increase from the 2010 Census. Data from the 2017 U.S. Census American Community Survey indicate that 5.2 percent of the population is 5 years of age or younger and 12.5 percent is 65 years of age or older. Communities must deploy a support system that enables all populations to safely reach shelters or to quickly evacuate a hazard area.

### 9.21.3 Growth/Development Trends

Understanding how past, current, and projected development patterns have or are likely to increase or decrease risk in hazard areas is a key component to understanding a jurisdiction’s overall risk to its hazards of concern. Table 9.21-2 summarizes recent and expected future development trends, including major residential/commercial development and major infrastructure development. Figures 9.21-1 and 9.21-2 at the end of this annex illustrate the geographically-delineated hazard areas and the location of potential new development.

**Table 9.21-2. Recent and Expected Future**

| Type of Development   | 2015   | 2016                    | 2017                                    | 2018                  | 2019   |
|---|--|-------------------------|---|-----------------------|--|
| <b>Number of Building Permits for New Construction Issued Since the Previous HMP</b>        |  |                         |   |                       |  |
| Single Family   | 1  | 1                       | 0                                       | 2                     | 1  |
| Multi-Family  | -  | -                       | -                                       | -                     | -  |
| Other (commercial, mixed-use, etc.)   | -  | -                       | -                                       | -                     | -  |
| Property or Development Name  | Type of Development                          | # of Units / Structures | Location (address and/or block and lot) | Known Hazard Zone(s)* | Description / Status of Development              |
| <b>Recent Major Development and Infrastructure from 2015 to Present</b>                     |  |                         |   |                       |  |
| Pitney Estates  | Part residential and part passive recreation | -                       | -                                       | None                  | 2018 subdivided, grant in 2019, finished in 2021 |
| <b>Known or Anticipated Major Development and Infrastructure in the Next Five (5) Years</b> |  |                         |   |                       |  |
| Sisters of Christian Charity  | Residential                                  | 5-8                     | -                                       | None                  | Potential  |

\* Only location-specific hazard zones or vulnerabilities identified.

### 9.21.4 Capability Assessment

The Township of Mendham performed an inventory and analysis of existing capabilities, plans, programs, and policies that enhance its ability to implement mitigation strategies. Section 5 (Capability Assessment) describes the components included in the capability assessment and their significance for hazard mitigation planning. This section summarizes the following findings of the assessment:

- An assessment of legal and regulatory capabilities.
- Development and permitting capabilities.
- An assessment of fiscal capabilities.
- An assessment of education and outreach capabilities.
- Information on National Flood Insurance Program (NFIP) compliance.
- Classification under various community mitigation programs.
- The community’s adaptive capacity for the impacts of climate change.



For a community to succeed in reducing long-term risk, hazard mitigation must be integrated into the day-to-day local government operations. As part of this planning effort, planning/policy documents were reviewed, and each jurisdiction was surveyed to obtain a better understanding of their progress in plan integration. Areas with current mitigation integration are summarized below. The Township of Mendham identified specific integration activities that will be incorporated into municipal procedures are included in the updated mitigation strategy.

**PLANNING, LEGAL AND REGULATORY CAPABILITY**

The table below summarizes the legal and regulatory tools that are available to the Township of Mendham and where hazard mitigation has been integrated.

**Table 9.21-3. Planning, Legal and Regulatory Capability**

|  | Do you have this?<br>(Yes/No) | Authority that enforces<br>(Federal, State, Regional, County, Local) | Is this State Mandated?     | Has the HMP been integrated in the last 5 years?<br>If yes- how? |   |
|--|-------------------------------|--|-----------------------------|--|---|
|  |                               |  |                             | If yes- how? Describe in comments                                | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| <b>Codes, Ordinances, &amp; Requirements</b>   |                               |  |                             |  |   |
| <b>Building Code</b>   | Yes                           | <b>State &amp; Local</b>   | Yes                         | -  | -   |
| <i>Comment: Updated by the Building Dept. State Uniform Construction Code Act (N.J.S. 52:27D-119 et seq.) Chapter 127 adopted by the Township Committee of the Township of Mendham by Ord. No. 13-1976 (Sec. 25-1 of the 1998 Revised General Ordinances). The Township of Mendham a State Uniform Construction Code Enforcing Agency to be known as the Township Building Department, consisting of a Construction Official, Building Subcode Official, Plumbing Subcode Official, Electrical Subcode Official, Fire Protection Subcode Official and such other subcode officials for such additional subcodes as may be promulgated under the Act. The Construction Official shall be the Chief Administrator of the enforcing agency.</i> |                               |  |                             |  |   |
| <b>Zoning Code</b>   | Yes                           | <b>Local</b>   | Yes, if have planning board | -  | -   |
| <i>Comment: Per Ch 10-38 there shall be a Zoning Board of Adjustment established as provided in the land development ordinances. Added 4-12-1999 by Ord. No. 7-1999. Updated by Planning Board; Board of Adjustment. Per State of NJ Municipal Land Use Law (MLUL) L. 1975, s. 2, eff Aug 1, 1976, 40-55D-62: 49. Power to zone, requires all jurisdictions to have current zoning and other land development ordinances after the planning board has adopted the land use element and master plan.</i>  |                               |  |                             |  |   |
| <b>Subdivisions</b>  | Yes                           | <b>Local</b>   | Yes, if have planning board | Yes  | -   |
| <i>Comment: Updated by Planning Board; Board of Adjustment in accordance with zoning and hazard mapping.</i>   |                               |  |                             |  |   |
| <b>Stormwater Management</b>   | Yes                           | <b>Federal, State, Local</b>   | Yes                         | Yes  | -   |
| <i>Comment: Title 7 of the NJ Administrative Code (N.J.A.C. 7:8); Updated by Township engineer. Chapter 297. In conformance with DEP regulations and to support water quality.</i>   |                               |  |                             |  |   |
| <b>Post-Disaster Recovery</b>  | No                            | <b>Local</b>   | No                          | -  | -   |
| <i>Comment:</i>  |                               |  |                             |  |   |
| <b>Real Estate Disclosure</b>  | Yes                           | <b>State</b>   | Yes                         | -  | -   |
| <i>Comment: N.J.A.C. 13:45A-29.1; Before signing a contract of sale, all purchasers must receive a New Jersey Public Offering Statement (POS) approved by the New Jersey Real Estate Commission. The POS provides information such as proximity to hospitals, schools, fire and police, as well as any hazards, risks or nuisances in or around the subdivision.</i>   |                               |  |                             |  |   |
| <b>Growth Management</b>   | Yes                           |  | Yes, if have planning board | -  | -   |
| <i>Comment: Zoning map. State Mandated on a municipal level. See Zoning Ordinance; Also - Plan Endorsement Process via the State Development &amp; Redevelopment Plan provides for the delineation of Growth Areas and Environs; Use of the endorsed plans in the implementation of state environmental regulations makes the Plan Endorsement process a growth management strategy.</i>   |                               |  |                             |  |   |





|  | Do you have this?<br>(Yes/No) | Authority that enforces<br>(Federal, State, Regional, County, Local) | Is this State Mandated?             | Has the HMP been integrated in the last 5 years?<br>If yes- how? |   |
|--|-------------------------------|--|-------------------------------------|--|---|
|  |                               |  |                                     | If yes- how? Describe in comments                                | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| Site Plan Review   | Yes                           | Local  | Yes, if have planning board         | -  | -   |
| <i>Comment: Updated by Planning Board; Board of Adjustment</i>   |                               |  |                                     |  |   |
| Environmental Protection   | No                            |  | Yes                                 | -  | -   |
| <i>Comment: The rules that are utilized by the NJDEP and other environmental agencies are codified at Title 7 of the NJ Municipal Administrative Code; Chapter 10-41 of municipal code authorizes environmental commission; Chapter 10-45 authorizes the Open Space Commission; Chapter 213 addresses littering</i>  |                               |  |                                     |  |   |
| Flood Damage Prevention  | Yes                           |  | No                                  | N/A  | -   |
| <i>Comment: Planning board as FPA. Engineer has authority to act as FPA by RESOLUTION 2015-5. Township to update Flood Damage Prevention Ordinance to appoint engineer as PPA.</i>   |                               |  |                                     |  |   |
| Wellhead Protection  | No                            |  | No                                  | N/A  | -   |
| <i>Comment:</i>  |                               |  |                                     |  |   |
| Emergency Management   | No                            |  | Yes                                 | N/A  | -   |
| <i>Comment: Per Chapter 10-44 there shall be an Office of Emergency Management pursuant to N.J.S.A. App. A:9-41, and a Director thereof. The Police Department and all departments of the Township government shall cooperate with and assist the office as required.</i>  |                               |  |                                     |  |   |
| Climate Change   | No                            |  | No                                  | -  | -   |
| <i>Comment:</i>  |                               |  |                                     |  |   |
| Disaster Recovery Ordinance  | No                            |  | No                                  | -  | -   |
| <i>Comment:</i>  |                               |  |                                     |  |   |
| Disaster Reconstruction Ordinance  | No                            |  | No                                  | -  | -   |
| <i>Comment:</i>  |                               |  |                                     |  |   |
| <b>Planning Documents</b>  |                               |  |                                     |  |   |
| Comprehensive / Master Plan  | Yes                           | Local  | Municipal:<br>Yes/No<br>County: Yes | Yes  | 2020-Mendham Township-0015  |
| <i>Comment: This plan was adopted on November 13, 2000, and amended/added to it on the following dates: November 1, 2001, April 1, 2002, June 15, 2005, February 6, 2006, and June 2, 2008. Township is currently updating the Master Plan and will include a reference to the HMP and Hazard Maps. Per NJSA: Yes, if planning board (40:55D-28) and must be re-examined every ten years (40:55D-89.1); Updated by Planning Board. Adopted Nov. 2000-2002. Reevaluation 2018. The Township's Master Plan was written in 2000, amended and re-examined in 2018. Open space and recreational areas are identified in the plan as well as their relationship to preservation of water quality. The relationship between low density development and steep slope development, woodland preservation is indicated. The re-zoning recommended by the 2000 Master Plan implemented the long term goals of protecting the high quality water resources and supporting a low density development pattern.</i> |                               |  |                                     |  |   |
| Capital Improvement Plan   | Yes                           | Local  | Allowed                             | -  | -   |
| <i>Comment: Updated annually. Per NJSA 40:55D-29 the governing body is authorized to direct the planning board to prepare a CIP with at least a six year planning horizon.</i>   |                               |  |                                     |  |   |
| Disaster Debris Management Plan  | No                            |  | No                                  | -  | -   |
| <i>Comment:</i>  |                               |  |                                     |  |   |
| Floodplain or Watershed Plan   | No                            |  | No                                  | -  | -   |
| <i>Comment: Updated 2015</i>   |                               |  |                                     |  |   |
| Stormwater Management Plan   | Yes                           | Local  | Yes                                 | -  | -   |





|  | Do you have this? (Yes/No) | Authority that enforces (Federal, State, Regional, County, Local) | Is this State Mandated? | Has the HMP been integrated in the last 5 years? If yes- how? |   |
|--|----------------------------|---|-------------------------|---|---|
|  |                            |   |                         | If yes- how? Describe in comments                             | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| <p><b>Comment:</b> Stormwater management supported by Ferriero Engineering. On website. 2005. Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s).</p>  |                            |   |                         |   |   |
| Stormwater Pollution Prevention Plan   | Yes                        |   | Yes                     | -   | -   |
| <p><b>Comment:</b> On website. 2019. This Municipal Stormwater Management Plan (MSWMP) documents the strategy for Mendham Township to address stormwater-related impacts. The creation of this plan is required by N.J.A.C. 7:14A-25 Municipal Stormwater Regulations. It contains all of the required elements described in N.J.A.C. 7:8 - Stormwater Management Rules. The plan addresses groundwater recharge, stormwater quantity, and stormwater quality impacts by incorporating stormwater design and performance standards for new major development, defined as projects that disturb one or more acre of land. Per NJDEP Storm Water Management Rule (N.J.A.C. 7:8, et seq.). The Municipal Stormwater Regulation Program was developed in response to the U. S. Environmental Protection Agency's (USEPA) Phase II rules published in December 1999. The Department issued final stormwater rules on February 2, 2004 and four (4) NJPDES general permits authorizing stormwater discharges from Tier A and Tier B municipalities, as well as public complexes, and highway agencies that discharge stormwater from municipal separate storm sewers (MS4s).</p> |                            |   |                         |   |   |
| Urban Water Management Plan  | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Habitat Conservation Plan  | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Economic Development Plan  | No                         |   | No                      | -   | -   |
| <p><b>Comment:</b> Per NJSA 40:55D-28b. (9) There can be a generic Economic Development Element of the County Comprehensive Plan. Municipality can establish Economic Development Commission that can facilitate incentive programs (façade programs, low-interest loans, etc.).</p>   |                            |   |                         |   |   |
| Shoreline Management Plan  | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Community Wildfire Protection Plan   | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Community Forest Management Plan   | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Transportation Plan  | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Agriculture Plan   | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Climate Action Plan  | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Tourism Plan   | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Business Development Plan  | No                         |   | No                      | -   | -   |
| <b>Comment:</b>  |                            |   |                         |   |   |
| Other: Open Space Plan   | Yes                        | Local   | No                      | -   | -   |
| <p><b>Comment:</b> Included in Conservation Plan. Updated by Environmental Commission. Open Space Trust Committee added by Ord. No. 10-199.8. The Open Space Trust Committee shall recommend the acquisition of specified lands in fee, the acquisition of specified easements and/or the acquisition of development rights to specified lands. The Committee shall prioritize the acquisitions recommended. The Township Committee shall determine which properties, easements or development rights should be acquired and shall determine the amount of funds that the</p>  |                            |   |                         |   |   |





|  | Do you have this? (Yes/No) | Authority that enforces (Federal, State, Regional, County, Local) | Is this State Mandated? | Has the HMP been integrated in the last 5 years? If yes- how? |   |
|--|----------------------------|---|-------------------------|---|---|
|  |                            |   |                         | If yes- how? Describe in comments                             | If no - can it be a mitigation action? If yes, add Mitigation Action #. |
| <i>Committee shall make available for the recommended acquisition. After selection of the lands, easements or development rights as hereinabove provided, the Township may proceed to acquire by gift, purchase or by eminent domain proceedings pursuant to N.J.S.A. 20:3-1 et seq., the identified lands, easements or development rights within the financial constraints established by the Township Committee.</i>  |                            |   |                         |   |   |
| <b>Other: Environmental Resource Inventory</b>   | Yes                        | Local   | Yes                     | -   | -   |
| <i>Comment: Updated by Environmental Commission prepared 11/2013. This includes referenced to and regulations regarding mapped floodplains.</i>  |                            |   |                         |   |   |
| <b>Other: Conservation Plan</b>  |                            |   |                         |   |   |
| <i>Comment: Mendham Township's Conservation Element was drafted by the Environmental Commission in 2001 for the comprehensive revision of the Master Plan adopted by the Planning Board on November 13, 2000. This element is particularly important because the new Master Plan puts special emphasis on the protection of the high quality natural resources of the Township, in particular the quality and quantity of water resources. Included are sections covering the major categories of natural resources found in the Township: Topography, Air, Surface Water, Groundwater, Wetlands, Wildlife and Vegetation, and Open Space.</i> |                            |   |                         |   |   |
| <b>Response/Recovery Planning</b>  |                            |   |                         |   |   |
| <b>Comprehensive Emergency Management Plan (CEMP) / Emergency Operations Plan (EOP)</b>  | Yes                        |   | EOP= Yes                | -   | -   |
| <i>Comment: Update 2019.</i>   |                            |   |                         |   |   |
| <b>Threat &amp; Hazard Identification &amp; Risk Assessment (THIRA)</b>  | No                         |   | No                      | -   | -   |
| <i>Comment:</i>  |                            |   |                         |   |   |
| <b>Post-Disaster Recovery Plan</b>   | No                         |   | No                      | -   | -   |
| <i>Comment:</i>  |                            |   |                         |   |   |
| <b>Continuity of Operations Plan</b>   | No                         |   | No                      | -   | -   |
| <i>Comment: In the EOP.</i>  |                            |   |                         |   |   |
| <b>Public Health Plan</b>  | No                         |   | -                       | -   | -   |
| <i>Comment:</i>  |                            |   |                         |   |   |
| <b>Other</b>   | No                         |   | -                       | -   | -   |

**Table 9.21-4. Development and Permitting Capability**

| Criterion  | Response                                    |
|--|---|
| Does your jurisdiction issue development permits?<br>- If no, who does? If yes, which department?  | Yes<br>Engineer, Planning and Zoning Boards |
| Does your jurisdiction have the ability to track permits by hazard area?   | No  |
| Does your jurisdiction have a buildable lands inventory?<br>-If yes, please describe briefly.<br>-If no, please quantitatively describe the level of buildout in the jurisdiction. | No  |

**ADMINISTRATIVE AND TECHNICAL CAPABILITY**

The table below summarizes potential staff and personnel resources available to the Township of Mendham.





**Table 9.21-5. Administrative and Technical Capabilities**

| Staff/Personnel Resource  | Available? | Department/Agency/Position                |
|---|------------|---|
| <b>Administrative Capability</b>  |            |   |
| Planning Board  | Yes        | Planning Board plus a Board of Adjustment |
| Mitigation Planning Committee   | No         | -   |
| Environmental Board / Commission  | Yes        | Environmental Commission                  |
| Open Space Board / Committee  | No         | -   |
| Economic Development Commission / Committee   | No         | -   |
| Warning Systems / Services<br>(reverse 911, outdoor warning signals)                    | Yes        | RAVE                                      |
| Maintenance program to reduce risk  | Yes        | Capital Program; DPW projects             |
| Mutual aid agreements   | Yes        | fire, EMS, police                         |
| <b>Technical/Staffing Capability</b>  |            |   |
| Planners or engineers with knowledge of land development and land management practices  | Yes        | Consultant Engineer                       |
| Engineers or professionals trained in building or infrastructure construction practices | Yes        | Consultant Engineer                       |
| Planners or engineers with an understanding of natural hazards                          | Yes        | Consultant Engineer                       |
| Staff with training in benefit/cost analysis  | No         | -   |
| Staff with training in green infrastructure   | No         | -   |
| Staff with education/knowledge/training in low impact development                       | Yes        | Consultant Engineer                       |
| Surveyor  | Yes        | Consultant Engineer                       |
| Stormwater engineer   | Yes        | Consultant Engineer                       |
| Personnel skilled or trained in GIS applications  | Yes        | Consultant Engineer                       |
| Local or state water quality professional   | Yes        | Consultant Engineer                       |
| Scientist familiar with natural hazards in local area                                   | Yes        | Consultant Engineer                       |
| Emergency manager   | Yes        | OEM                                       |
| Watershed planner   | Yes        | Raritan River Coalition                   |
| Environmental specialist  | Yes        | Consultant Engineer                       |
| Grant writers   | Yes        | OEM, various staff                        |
| Resilience Officer  | No         | -   |
| Other   | -          | -   |

**FISCAL CAPABILITY**

The table below summarizes financial resources available to the Township of Mendham.

**Table 9.21-6. Fiscal Capabilities**

| Financial Resource                                  | Accessible or Eligible to Use? |
|---|--------------------------------|
| Community Development Block Grants (CDBG, CDBG-DR)  | No                             |
| Capital Improvements Project Funding                | Yes, through municipal budget  |
| Authority to Levy Taxes for Specific Purposes       | Yes                            |
| User Fees for Water, Sewer, Gas or Electric Service | sewer                          |
| Incur Debt through General Obligation Bonds         | Yes                            |
| Incur Debt through Special Tax Bonds                | Yes                            |





| Financial Resource                                     | Accessible or Eligible to Use? |
|--|--------------------------------|
| Incur Debt through Private Activity Bonds              | No                             |
| Withhold Public Expenditures in Hazard-Prone Areas     | No                             |
| State-Sponsored Grant Programs                         | Yes                            |
| Development Impact Fees for Homebuyers or Developers   | No                             |
| Clean Water Act 319 Grants (Nonpoint Source Pollution) | No                             |
| Other  | Yes                            |

**EDUCATION AND OUTREACH CAPABILITY**

The table below summarizes the education and outreach resources available to the Township of Mendham.

**Table 9.21-7. Education and Outreach Capabilities**

| Criterion  | Response  |
|--|---|
| Do you have a public information officer or communications office?   | Yes   |
| Do you have personnel skilled or trained in website development?   | Yes   |
| Do you have hazard mitigation information available on your website?<br>• If yes, briefly describe.  | Yes   |
| Do you use social media for hazard mitigation education and outreach?<br>• If yes, briefly describe.   | <a href="http://www.mendhamtownship.org/">http://www.mendhamtownship.org/</a> |
| Do you have any citizen boards or commissions that address issues related to hazard mitigation?<br>• If yes, briefly describe.               | Yes   |
| Do you have any other programs already in place that could be used to communicate hazard-related information?<br>• If yes, briefly describe. | Facebook, Instagram, Twitter  |
| Do you have any established warning systems for hazard events?<br>• If yes, briefly describe.  | Yes   |

**COMMUNITY CLASSIFICATIONS**

The table below summarizes the classifications for community programs available to the Township of Mendham.

**Table 9.21-8. Community Classifications**

| Program  | Participating? | Classification | Date Classified |
|--|----------------|----------------|-----------------|
| Community Rating System                              | No             |                |                 |
| Building Code Effectiveness Grading Schedule (BCEGS) | No             |                |                 |
| Public Protection (Fire ISO Protection Class)        | Yes            | 3 and 3Y       | 2019            |
| Storm Ready Certification                            | No             |                |                 |
| Firewise Community Classification                    | No             |                |                 |
| Sustainable Jersey                                   |                |                |                 |

**ADAPTIVE CAPACITY**

Adaptive capacity is defined as “the ability of systems, institutions, humans and other organisms to adjust to potential damage, to take advantage of opportunities, or respond to consequences” (IPCC 2014). In other words, it describes a jurisdiction’s current ability to adjust to, protect from, or withstand a hazard event. This term is often discussed in reference to climate change; however, adaptive capacity also includes an understanding of





local capacity for adapting to current and future risks and changing conditions. The table below summarizes the adaptive capacity for each hazard and the jurisdiction’s rating.

**Table 9.21-9. Adaptive Capacity**

| Criterion  | Response |
|--|----------|
| Does the municipality have access to resources to determine the possible impacts of climate change upon the municipality?        | Yes      |
| Is the administrative supportive of integrating climate change in policies or actions?   | No       |
| Is climate change already being integrated into current policies/plans or actions (projects/monitoring) within the municipality? | No       |

| Hazard                | Adaptive Capacity (Capabilities) - High/Medium/Low |
|-----------------------|--|
| Dam Failure           | Medium   |
| Disease Outbreak      | Medium   |
| Drought               | Low  |
| Earthquake            | High   |
| Extreme Temperature   | Medium   |
| Flood                 | Medium   |
| Geologic              | Medium   |
| Harmful Algal Bloom   | Medium   |
| Hazardous Substances  | Medium   |
| Infestation           | Medium   |
| Severe Weather        | Medium   |
| Severe Winter Weather | Medium   |
| Wildfire              | Medium   |

**NATIONAL FLOOD INSURANCE PROGRAM**

This section provides specific information on the management and regulation of the regulatory floodplain.

**Table 9.21-10. National Flood Insurance Program Compliance**

| Criterion   | Response   |
|---|--|
| What local department is responsible for floodplain management?   | Flood Damage Prevention Ordinance notes Planning Board as the appointed floodplain administrator, the Township has authorized its engineer to act as floodplain administrator. |
| Who is your floodplain administrator? (name, department/position)   | Township Engineer-Denis Keenan   |
| Are any certified floodplain managers on staff in your jurisdiction?  | Yes, Engineering Consultant  |
| What is the date that your flood damage prevention ordinance was last amended?  | This date is not noted on the ordinance but may coincide with the flood map adoption date of 10/2/97   |
| Does your floodplain management program meet or exceed minimum requirements?<br><ul style="list-style-type: none"> <li>If exceeds, in what ways?</li> </ul> | Meets  |



| Criterion  | Response                                 |
|--|--|
| When was the most recent Community Assistance Visit or Community Assistance Contact?   | N/a                                      |
| Does your jurisdiction have any outstanding NFIP compliance violations that need to be addressed?<br><ul style="list-style-type: none"> <li>If so, state what they are.</li> </ul>   | None                                     |
| Are any RiskMAP projects currently underway in your jurisdiction?<br><ul style="list-style-type: none"> <li>If so, state what they are.</li> </ul>   | No                                       |
| Do your flood hazard maps adequately address the flood risk within your jurisdiction?<br><ul style="list-style-type: none"> <li>If no, state why.</li> </ul>   | n/a                                      |
| Does your floodplain management staff need any assistance or training to support its floodplain management program?  | Yes                                      |
| <input type="checkbox"/> If so, what type of assistance/training is needed?  | Clyde Potts Dam Dam Break Analysis       |
| Does your jurisdiction participate in the Community Rating System (CRS)?<br><ul style="list-style-type: none"> <li>If yes, is your jurisdiction interested in improving its CRS Classification?</li> <li>If no, is your jurisdiction interested in joining the CRS program?</li> </ul> | No                                       |
| How many flood insurance policies are in force in your jurisdiction?*  | 25                                       |
| <ul style="list-style-type: none"> <li>What is the insurance in force?</li> <li>What is the premium in force?</li> </ul>   | \$28,482                                 |
| How many total loss claims have been filed in your jurisdiction?*  | Yes                                      |
| <ul style="list-style-type: none"> <li>How many claims are still open or were closed without payment?</li> <li>What were the total payments for losses?</li> </ul>   | 9 closed without payment<br>\$179,747.84 |
| Do you maintain a list of properties that have been damaged by flooding?   | CFM certification                        |
| Do you maintain a list of property owners interested in flood mitigation?  | No                                       |

\*According to FEMA statistics as of July 2019

**ADDITIONAL AREAS OF EXISTING INTEGRATION**

Soils: There are 16 separate types of soils encompassing the Township. Many of these soil types have characteristics that make development difficult, such as severe limitations for onsite septic systems or high groundwater table. Other common characteristics pose environmental dangers such as high erosion potential.

- Master Plan Integrated Items include:

-Surface Water: The Township is strategically located at the headwater of three major river basins in northern New Jersey which are the sources of potable water: the Passaic which drains directly into the Great Swamp National Wildlife Refuge, the Raritan, and the Whippany. Regionally based environmental interest groups have focused attention on the protection of these headwater areas in the Township as important to water quality and quantity and to reducing flooding in the river basins. In addition, flood storage areas in the Township are important to diminishing flood levels and the frequency of flooding downstream. All of the numerous rivers and streams in the Township are currently classified by NJDEP as “trout production” or “trout maintenance”, the highest quality classifications. The high quality of these watershed resources in the Township directly influences water quality downstream in the basins and the Refuge.

- Wetlands: The types of wetlands typically found in Mendham are among the most environmentally important for maintaining downstream water quality. Among these are:





- Hillside seeps and springs important to maintaining base flows and moderating water temperature vital to trout production and maintenance.
- Forested wetlands important to moderating water temperature, trapping silt, reducing turbidity, and promoting evapotranspiration.
- Swamps (forested wetlands not associated with streams) important to base flow and attenuating flooding and bank erosion.

Wetlands in Mendham Township are generally found in three areas and compromise approximately three to five percent of the Township:

- The uppermost reaches of sub-watershed catchments.
- Level areas at the base of slopes associated with stream corridors.
- Upper Whipping River Flood Plain in Washington Valley.

In Mendham Township wetlands are extremely important because of their vital role in protecting the fragile water quality of the numerous trout production and trout maintenance streams in the Township. Since these streams feed a number of sources of public water supply downstream, wetlands in Mendham Township are by extension also important to public health.

-Water Supply: Most areas of the Township are served by individual private onsite wells. There are limited areas served by public water lines. The low-density pattern of development in the Township makes the extension of public water system(s) impractical and inappropriate in most areas. In some areas older wells have failed requiring drilling of newer wells at greater depths. The apparent lowering of the water table in some areas is an important issue of police concern of the Township. An important issue associated with water supply is fire protection. The onsite private wells in the large areas of the Township without water lines are inadequate for fire protection purposes and the dry hydrants into ponds in these areas are also limited and inadequate. In these areas, underground tanks for fire protection are required improvements as part of major developments.

-Sanitary Sewers: Most existing development in the Township is served by individual onsite septic systems. Soil characteristics are an important factor in the construction of onsite systems. In many areas of the Township, soil conditions are severe for the construction of such systems. However, the low density pattern of development makes the extension of public sanitary systems(s) impractical and inappropriate in most areas. Only three areas of the Township are served by public sanitary sewers all of which are relatively higher-density developments.

- Brookrace: 98 units off of Pleasant Valley Road
- Drakewick: 92 units off of Tempe Wick Road and Route 24
- Mountainview; 12 units off of Cold Hill Road

-Stormwater Drainage: The control of stormwater runoff is an important public policy issue in the Township because of the harmful effects that stormwater can have on water quality in the numerous high quality trout production and trout maintenance streams in the Township. Stormwater drainage associated with new development is controlled by ordinance regulations which require detention/retention to assure water quality and to control flows. Stormwater drainage from existing public and private roadways and other impervious surfaces into nearby streams continues to have a



harmful environmental impact on those streams. The Township Public Works Department is active in improving and maintaining drainage systems associated with local public roads.

**-Recommendations for Zone Districts and Minimum Lot Standards**

The Critical Water Resources Study recommended that a maximum of 2,111 dwellings can be supported by the Township’s groundwater resources. The Township’s zone plan which was in effect at the time of the adoption of this plan permits a total amount of development far in excess of this figure at full build-out. After this plan was implemented, substantial changes in the zone districts to increase the minimum lot size in many area were made. The Master Plan Subcommittee concluded that these changes were necessary in order to bring the future development more into line with groundwater resource capacity.

o The New Zone District Plan Recommendation was as Follows:

- The total build-out potential should not exceed 2,111 dwellings, or as close to that target as reasonably possible.
  - New very low density districts (10-acre districts) should be created in areas with an existing pattern of very low density of development.
  - Large areas if public of quasi-public open space should be included in very low-density (10-acre) districts.
  - Most existing properties within a zone district should be fairly consistent with the district’s standards; i.e. the number of existing properties nonconforming to zoning standards should be minimized.
  - Provision should be made to avoid the necessity for property owners to make applications to the Zoning Board of Adjustment for new construction or additions to single family dwellings on lots rendered undersized or nonconforming as a result of rezoning.
  - Zone districts should be as large as possible with boundaries that follow property lines and road lines.
  - The zoning for the Mendham Golf &Tennis Club should be consistent with its current use.
- Public outreach to educate regarding emerald ash borer – this was video-taped and broadcast on local cable.
  - The Township Consulting Engineering firm, Ferriero Engineering, Inc., provides design and inspection services for Township infrastructure and capital projects such as drainage, road improvements, and park improvements. They also provide assistance to the Township when applying for grant applications and help manage those grants when awarded. FEI has been appointed by the Planning Board and Board of Adjustment to assist these Boards with technical review when applications are filed by private developers or homeowners. The firm will also provide review of Land Disturbance and Lot Development Permit Applications for developed and undeveloped lots that do not require any Board approval. Their staff will inspect projects at various stages during construction to ensure that compliance with the approved plans is achieved.
  - Any project in the Township that will disturb more than 5,000 SF of land will require a Land Disturbance Permit from Mendham Township and approval by the Morris County Soil Conservation District prior to commencement. Land Disturbance is defined as “Any activity involving the clearing, cutting, excavation, grading, filling, storing or transporting of land, or any other activity which causes land to be exposed to the danger of erosion.” A NJ licensed engineer is required to prepare the plan that must accompany the application.



- Any project in the Township that will require the demolition of an existing principal structure, the construction of a new principal structure, or an addition to a principal structure of greater than 50% of the existing floor area, will require a Lot Development Permit from Mendham Township prior to commencement. A separate Land Disturbance Permit is not required in this case, but the Morris County Soil Conservation District approval is required.
- The general administration of the Township is managed by the Township Administrator. The Administrator oversees all municipal departments, coordinates the day to day operations of the community and carries out the policies as set by the elected Township Committee. Acting as the principal liaison between the Township Committee, township departments and the general public, the Township Administrator supervises a wide range of operational activities. The Administrator’s duties include:
  - Execution and enforcement of Township ordinances, resolutions and other Committee policies.
  - Management of Township personnel.
  - Oversight of the Township’s purchasing program.
  - Supervision of Township major capital improvement projects.
  - Preparation of the Township’s annual budget and management of expenditures under the budget plan.
  - Coordination of the Township’s open space acquisition program
  - Solicitation of grant funding for various programs and projects.
  - Oversight of the Township’s public information activities (including the website and Mendham TV).
  - Oversight of various State Mandated programs (such as Stormwater Management, Recycling, Affordable Housing, etc.).
  - General coordination of all citizen service requests.
  - Various other activities as directed by the Township Committee.
- The Mendham Township Committee includes representatives to Open Space, Whippany Watershed Commission; Finance, and Wildlife Management.
- The finance officer oversees all aspects of finance within the Township, including tax collection, tax assessment, payroll, purchasing and budgetary accounting. The finance officer administers the investment program, borrowing and repaying of debt and interest, the rendering of all tax bills, collection of all cash receivables and the maintenance of proper records associated with the safekeeping of funds.

### **9.21.5 Hazard Event History Specific to the Jurisdiction**

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Morris County has a history of hazard events, as detailed in Section 4 (Risk Assessment) of this plan. A summary of historical events is provided in each of the hazard profiles in Section 4.4 (Hazard Profiles) and includes a chronology of events that affected Morris County and its jurisdictions. The Township of Mendham’s history of federally-declared (as presented by FEMA) and significant hazard events (as presented in NOAA-NCEI) is consistent with that of Morris County. Table 9.21-11 provides details regarding municipal-specific loss and damages the Township of Mendham experienced during hazard events. Information provided in the table below is based on reference material or local sources.



**Table 9.21-11. Hazard Event History**

| Date(s) of Event    | Event Type (disaster declaration if applicable) | Morris County Designated? | Summary of Event  | Summary of Local Damages and Losses   |
|---------------------|---|---------------------------|---|---|
| January 21-24, 2016 | Severe Winter Storm and Snowstorm (DR-4264)     | Yes                       | An impulse from the west coast traversed the midsection of the country, then developed into a low pressure system as it tracked across the Gulf states before intensifying along the Carolina coast into a major nor'easter, producing record snowfall in parts of New Jersey on January 23rd. It then moved out to sea after passing by the mid-Atlantic coast early on January 24th. Wind gusts up to 60 MPH produced blizzard conditions as visibilities dropped to one-quarter mile or less in spots. Snow began during the evening hours on the 22nd, then continued, heavy at times through the 23rd before ending early on the 24th. Snowfall totals included 30.0 inches in Long Valley, 29.0 inches in Madison, 26.0 inches in Budd Lake, 25.3 inches in Green Pond, 22.5 inches in Butler, and 21.0 inches in Chatham. At one point during the storm, up to 270,000 customers were without power. | Salt, plowing, staff overtime, equipment \$75,000 reimbursed at 75%                                   |
| March 6-7, 2018     | Severe Winter Storm and Snowstorm (DR-4368)     | Yes                       | Precipitation gradually overspread the region during the overnight hours of March 6th to the 7th. 12 to 24 inches was observed across large parts of Morris County. The snow contained large amounts of liquid, making it heavy and wet. This resulted in downed trees, limbs, and wires, leading to numerous power outages across portions of New Jersey, especially where the heaviest snow was reported. Many customers were still without power from the previous storm when this storm struck. Governor Murphy estimated about 350,000 customers state-wide lost power as a result of this second storm. Governor Phil Murphy declared a state of emergency which went into effect at 8 PM Tuesday March 6th.  | Debris removal, salt, staff overtime, equipment, plowing, property damage \$325,000 reimbursed at 75% |



### 9.21.6 Jurisdiction-Specific Vulnerabilities and Hazard ranking

The hazard profiles in Section 4 (Risk Assessment) provide detailed information regarding each plan participant's vulnerability to the identified hazards. Table 9.21-12 summarizes the Township of Mendham's risk assessment results and data used to determine the hazard ranking.

A gradient of certainty was developed to summarize the confidence level regarding the input used to populate the hazard ranking. A certainty factor of high, medium or low was selected and assigned to each hazard to provide a level of transparency and create increased understanding of the data used to support the resulting ranking. The following scale was used to assign a certainty factor to each hazard:

- High—Defined scenario/event to evaluate; probability calculated; evidenced-based/quantitative assessment to estimate potential impacts through hazard modeling.
- Moderate—Defined scenario/event or only a hazard area to evaluate; estimated probability; combination of quantitative (exposure analysis, no hazard modeling) and qualitative data to estimate potential impacts.
- Low—Scenario or hazard area is undefined; there is a degree of uncertainty regarding event probability; majority of potential impacts are qualitative.



Table 9.21-12. Summary of Risk Assessment Results

| Hazard of Concern          | Hazard/ Scenario Area Evaluated  | Population  |     | Buildings   |    | Economy (Loss)   |              | Certainty Factor |
|----------------------------|--|---|-----|---|----|--|--------------|------------------|
| <b>Dam Failure</b>         | Partial or complete failure of a dam<br><br>There are 10 dams in the Township, according to NJDEP.   | Population impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure.       |     | The number of building impacted is dependent on the capacity of the dam, the extent of the dam failure inundation area and the severity of the failure. |    | Economic impacts include dam/building/infrastructure repairs; debris removal/disposal; utility impacts.  |              | Low              |
| <b>Disease Outbreak</b>    | Disease Outbreaks which include: Mosquito-Borne Diseases, Tick-Borne Diseases, Campylobacteriosis, Influenza, Mumps, Ebola                                 | Population impacted is dependent on the disease and severity of the outbreak; in some cases immunocompromised persons are more vulnerable.        |     | Structural impacts due to disease outbreak would be limited.  |    | Economic losses can include County financial impacts to monitor/address outbreaks; lost wages or commercial interruptions; depends on the severity and type of disease outbreak. |              | Low              |
| <b>Drought</b>             | Prolonged drought event - The County is serviced by water supplies who primarily get water from groundwater sources; some surface water sources.           | Entire population exposed. Population on surface water supplies may be impacted first; water restrictions/contamination; increased wildfire risk. |     | Droughts are not expected to cause direct damage to buildings.  |    | Losses include aesthetic, landscape/nursery/agricultural industry impacts.   |              | Low              |
| <b>Earthquake</b>          | "100, 500-, 2,500-Year Mean Return Period (MRP) Events evaluated<br><br>NEHRP Soils D&E (soft soils that amplify ground shaking are present in the County" | NEHRP D&E:  | 0   | NEHRP D&E:  | 0  | 100-year Loss:   | \$0          | High             |
|                            |  | Liquefaction Class 4:   | 0   | Liquefaction Class 4:   | 0  | 500-year Loss:   | \$1,127,707  |                  |
|                            |  |   |     |   |    | 2,500-year Loss:   | \$19,296,355 |                  |
| <b>Extreme Temperature</b> | Extreme temperature event (heat or cold)   | Over 65 Population:   | 737 | Physical impacts due to extreme temperatures would be limited.  |    | Loss of business function is possible due to unexpected repairs (i.e. pipes bursting) or power failures.   |              | Low              |
|                            |  | Population Below Poverty Level:   | 147 |   |    |  |              |                  |
| <b>Flood</b>               | 100- and 500-Year Mean Return Period Event   | 100-year  | 43  | 100-year  | 26 | 100-year Loss:   | \$9,874,031  | High             |
|                            |  | 500-year  | 58  | 500-year  | 34 |  |              |                  |
| <b>Geological</b>          |  | Class A:  | 13  | Class A:  | 5  | Class A:   | 2050577.916  | Moderate         |





| Hazard of Concern            | Hazard/ Scenario Area Evaluated   | Population  |     | Buildings   |     | Economy (Loss)  |               | Certainty Factor |
|------------------------------|---|---|-----|---|-----|---|---------------|------------------|
|                              |   | Class B:  |     | Class B:  |     | Class B:  |               |                  |
|                              | High Landslide Susceptibility Areas and Areas developed over carbonate rock   | Class B:  | 80  | Class B:  | 34  | Class B:  | \$33,243,377  |                  |
|                              |   | Carbonate Bedrock:  | 311 | Carbonate Bedrock:  | 163 | Carbonate Bedrock:  | \$146,701,758 |                  |
| <b>Harmful Algal Bloom</b>   | Any body of water or area adjacent that is susceptible to harmful algal bloom.  | Population in contact (e.g., swimming) or drinking water from surface water impacted can result in a range of health effects          |     | General building stock impacts due to harmful algal bloom are not anticipated. Critical facilities (i.e., water treatment plants) could lead to plant closures. |     | Economic impacts range from recreational closure of impacted waterbodies; cost to sample/monitor/remediate.               |               | Low              |
| <b>Hazardous Substance</b>   | Release of a hazardous substance from a fixed site.   | Population impacted will depend on the type of material and scale of the incident. May include population within small radii of site. |     | The degree of damages to a building depends on the scale of the incident.   |     | The degree of damages depends on the scale of the incident.   |               | Low              |
| <b>Infestation</b>           | Infestation including: Insects [e.g. Gypsy Moth, Mosquitoes, Spotted Lanternfly, Emerald Ash Borer], White-Tailed Deer, Rodents | Population impacted will depend on the type and severity of infestation and may cause an increased risk for disease outbreak.         |     | Physical impacts will be limited to indirect impacts from invasive species which affect crops and vegetation.   |     | Economic impact will depend on the type and severity of infestation and may cause an increased risk for disease outbreak. |               | Low              |
| <b>Severe Weather</b>        | Severe Weather Event  | Entire population exposed; The degree of impact to the population depends on the scale of the incident.                               |     | Entire building stock is exposed; The degree of impact depends on the scale of the incident.  |     | Annualized Loss:  | \$27,893      | High             |
|                              |   |   |     |   |     | 100 -Year Loss:   | \$656,750     |                  |
|                              |   |   |     |   |     | 500-year Loss:  | \$3,950,545   |                  |
| <b>Severe Winter Weather</b> | Severe Winter Weather Event   | All residents/commuters/visitors are exposed; socially-vulnerable populations may be at increased risk.                               |     | All buildings are exposed; the degree of impact depends on the scale of the incident.   |     | The cost of snow and ice removal and repair of roads/infrastructure can impact operating budgets.                         |               | Low              |
| <b>Wildfire</b>              | Wildfire Fuel Hazard areas (High, Very High, Extreme)   | Wildfire:   | 48  | Wildfire:   | 22  | Wildfire:   | \$23,880,733  | Moderate         |



REPETITIVE FLOOD LOSSES

The following summarizes the repetitive and severe repetitive flood losses in the Township of Mendham.

- Number of repetitive loss (RL) properties: 2
Number of severe repetitive loss (SRL) properties: 0
Number of RL/SRL properties that have been mitigated: 0

Source: FEMA BureauNet, 2019

Note: RL and SRL as of 04/26/2019; The number of SRL properties excludes RL properties and includes properties that have been verified only (SRL\_Indicator = V).

CRITICAL FACILITIES

The table below identifies critical facilities in the community located in the 1-percent and 0.2-percent floodplain.

Table 9.21-13. Potential Flood Losses to Critical Facilities and Lifelines

Table with 5 columns: Name, Type, Exposure (1% Event, 0.2% Event), Status of Mitigation. Rows include Township of Mendham Police Department, Southeast Morris Co MUA Clyde Potts WTP, Ledells's Dam, and Mendham Township First Aid Squad.

\*Identified lifeline

ADDITIONAL IDENTIFIED VULNERABILITIES

The jurisdiction has identified the following vulnerabilities within their community:

Roxitus Road, Union Schoolhouse Road, and Pleasant Valley Road frequent flooding causing 2-3 feet flooding during Hurricane Irene which undermined the road and created impassible conditions. However, due to state regulations, raising road is not an option as it is located in the floodplain. A potential solution, install concrete retaining wall between creek and road, may not be feasible with DEP. Currently, the Township closes the road when 2 - 3" of rain is predicted. There are 2 houses on Union Schoolhouse Road. Roxiticus and Pleasant Valley roads are commuting routes to Peapack Gladstone and Mendham and can be closed with detours.

HAZARD AREA EXTENT AND LOCATION

Hazard area extent and location maps were generated for the Township of Mendham that illustrate the probable areas impacted within the municipality. These maps are based on the best available data at the time of the preparation of this plan and are adequate for planning purposes. Maps have been generated only for those hazards that can be clearly identified using mapping techniques and technologies and for which the Township of Mendham has significant exposure. Refer to Figures 9.21-1 and 9.21-2.



**HAZARD RANKING**

This section includes the community specific identification of the primary hazard concerns based on identified problems, impacts and the results of the risk assessment as presented in Section 5 (Risk Assessment). The ranking process involves an assessment of the likelihood of occurrence for each hazard; its potential impacts on people, property, and the economy; community capability and changing future climate conditions. This input supports the mitigation action development to target those hazards with highest level of concern.

As discussed in Section 4.3 (Hazard Ranking), each plan participant may have differing degrees of risk exposure and vulnerability compared to Morris County as a whole. Therefore, each jurisdiction ranked the degree of risk to each hazard as it pertains to their community factoring in their capabilities to withstand impacts and rebound after the event. The table below summarizes the hazard rankings of potential natural hazards for the Township of Mendham. The Township of Mendham has reviewed the Morris County hazard ranking table, as well as its individual results, to reflect the relative risk of the hazards of concern to the community. During the review of the hazard ranking, the Township indicated the following:

- The Township acknowledges the potential for catastrophic failure of Clyde Pott’s Dam, Ledells’s Dam and Brookrace Dam and has adjusted the rank of Dam Failure to high.
- The Township adjusted the ranking of flood to high due to the vulnerability of the police station to flooding which causes an interruption of critical services.

**Table 9.21-14. Township of Mendham Hazard Ranking Input**

| Dam Failure | Drought | Earthquake | Extreme Temperature | Flood | Geological Hazard |
|-------------|---------|------------|---------------------|-------|-------------------|
| High        | Medium  | Medium     | Medium              | High  | Low               |

| Harmful Algal Bloom | Severe Storm | Severe Winter Storm | Wildfire | Hazardous Substances | Disease Outbreak | Infestation |
|---------------------|--------------|---------------------|----------|----------------------|------------------|-------------|
| Low                 | High         | High                | Low      | Low                  | High             | High        |

**9.21.7 Mitigation Strategy and Prioritization**

This section discusses past mitigations actions and status, describes proposed hazard mitigation initiatives, and provides action prioritization.

**PAST MITIGATION INITIATIVE STATUS**

The following table summarizes the jurisdiction’s progress on their mitigation strategy identified in the 2015 HMP. Actions that are carried forward as part of this plan update are included in the following subsection in its own table with prioritization. Previous actions that are now on-going programs and capabilities are indicated as such in the following table and can also be found under ‘Capability Assessment’ presented previously in this annex.



Table 9.21-15. Status of Previous HMP Mitigation Actions

| 2015 Action Number Action Description   | Responsible Party                     | Status<br>(In Progress, No Progress, Ongoing Capability, or Completed)     | Include in the 2020 HMP Update?                   |                            |
|---|---------------------------------------|--|---|----------------------------|
|   |                                       |  | Check if Yes                                      | Enter 2020 HMP Action #    |
| Mendham Twp 1 ; Brookside Main Street property protection (storm water management). Additional drainage to extend beyond current scope  | Township Engineer                     | Complete   | -   | -                          |
| Mendham Twp 2: Pitney drainage property protection (storm water management). Twp must determine use of municipal property & open space.   | Township Engineer                     | No progress.   | No longer viable project due to property transfer | -                          |
| Mendham Twp 3: Martins Lane property protection (storm water management). Redirect runoff.  | Township Engineer                     | Completed  | No  |                            |
| Mendham Twp 4: Roxiticus Road property protection (storm water management). Ascertain impact of road alignment. Capital project impact.   | Township Engineer                     | In progress  | X<br>Leave in but modified                        | 2020-Mendham Township-0013 |
| Mendham Twp 5: Dam status evaluation (three dams) Woodland Lake Dam, Clyde Potts Dam, and Brookrace Dam. Ascertain impact of drainage improvements against dam evaluation.  | Township Engineer                     | In progress. Addressed Brookrace and Lidell's Dam, Phase 1 of Clyde Potts. | Yes, but modified                                 | 2020-Mendham Township-0014 |
| Mendham Twp 6: Relocate Police Department Headquarters out of floodplain. The Twp must assess the accessibility of keeping the building in current location. Determine alternate location on current Township-owned properties. | OEM Coordinator;<br>Township Engineer | In progress  |   | 2020-Mendham Township-001  |
| Mendham Twp 7: Sewage package Plant backup generator (two). Locations secured. Specs complete. Public awareness initiative plan to be executed.   | Township Engineer                     | Complete   | -   | -                          |
| Mendham Twp 8: Sewage package Plant infrastructure upgrades (two). Technology selected. RFP to be completed. Public awareness campaign drafted  | Township Engineer                     | Complete. Township spent around \$4M on WWTP upgrades.                     | -   | -                          |
| Mendham Twp 9: Retention Basin Improvement/capacity upgrade (five). Identifying adjacent properties. Identifying impact. Ascertain impact against drainage improvements.  | Township Engineer                     | In progress  | X modified  | 2020-Mendham Township-008  |
| Mendham Twp 10: Underground cistern fire hydrants (six). Existing street-fed cisterns cleared. Locations for additional to be established. Cisterns located for complete coverage of Twp must be confirmed.                     | Township Engineer                     | In progress  | x   | 2020-Mendham Township-009  |
| Mendham Twp 11: Stream Bank stabilization Mosle Road. Current activities clearing property. Ascertain impact against drainage improvements.   | Township Engineer                     | No progress.   | x   | 2020-Mendham Township-0010 |



| 2015 Action Number Action Description   | Responsible Party    | Status<br>(In Progress, No Progress, Ongoing Capability, or Completed) | Include in the 2020 HMP Update? |                            |
|---|----------------------|--|---------------------------------|----------------------------|
|   |                      |  | Check if Yes                    | Enter 2020 HMP Action #    |
| Mendham Twp 12: Develop all-hazards public education and outreach program for hazard mitigation and preparedness. Local OEM to draft outreach program. Twp has all outreach structure in place. Local OEM to provide message and plan for outreach. | Local and County OEM | In progress  | x                               | 2020-Mendham Township-0011 |

In addition to the above progress, the Township of Mendham identified the following mitigation projects/activities that were completed but not identified in the 2015 HMP mitigation strategy:

- Constructed new emergency services building moved out of the flood zone.
- Constructed drainage projects to reduce or eliminate dangerous icing conditions on West Main St, Farm Drive. Will install another on West Main St. and Wilrich Glen funded by municipal operating budget.

**PROPOSED HAZARD MITIGATION INITIATIVES FOR THE PLAN UPDATE**

The Township of Mendham participated in a mitigation action workshop in March 2020 and was provided a Mitigation Toolbox that included a mitigation catalog developed specifically for Morris County and its hazards of concerns; challenges and opportunities identified during the capability and risk assessments; and the following FEMA publications to use as a resource as part of their comprehensive review of all possible activities and mitigation measures to address their hazards: FEMA 551 *Selecting Appropriate Mitigation Measures for Floodprone Structures* (March 2007) and FEMA *Mitigation Ideas – A Resource for Reducing Risk to Natural Hazards* (January 2013). Section 6 (Mitigation Strategy) and Appendix F (Mitigation Strategy Supplement) provide a more complete description of the Mitigation Toolbox and its resources.

Table 9.21-11 summarizes the comprehensive-range of specific mitigation initiatives the Township of Mendham would like to pursue in the future to reduce the effects of hazards. Some of these initiatives might be previous actions carried forward for this HMP update. Initiatives are dependent upon available funding (grants and local match availability) and can be modified or omitted at any time based on the occurrence of new hazard events and changes in municipal priorities. Both the 4 FEMA mitigation action categories and the 6 CRS mitigation action categories are listed in the table below to further demonstrate the wide-range of activities and mitigation measures selected.

As discussed in Section 6 (Mitigation Strategy), 14 criteria were used to evaluate each action, including an evaluation of the benefits and costs. For each new mitigation action, a numeric rank was assigned (-1, 0, or 1) for each of the 14 evaluation criteria. The results of this evaluation, in addition to input from the jurisdiction, were then used to prioritize the mitigation initiatives as ‘High’, ‘Medium’, or ‘Low.’ Table 9.21-17 summarizes the evaluation of each mitigation initiative and the resulting priority, listed by Action Number.



Table 9.21-16. Proposed Hazard Mitigation Initiatives and Associated Priority

| Initiative Number         | Mitigation Initiative Name                              | Description of the Problem   | Description of the Solution  | New or Existing Assets? | Hazard(s) to be Mitigated                          | Goals Met  | Lead and Support Agencies | Potential Funding Sources            | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|---------------------------|---|--|--|-------------------------|--|------------|---------------------------|--------------------------------------|--------------------|----------------|----------|----------|---------------------|--------------|
| 2020-Mendham Township-001 | Township of Mendham Police Department* flood prevention | Police headquarters experiences frequent flooding, inundating the basement and causing equipment and records damage.   | Relocate the police headquarters from the current location as the structure is subject to frequent flooding and causes inadequate space due to the limitations caused by the flooding. | Existing                | Flood  | 4A, 5D     | Township Administrator    | FEMA HMA, local match                | High               | High \$2-3M    | Short    | High     | SIP                 | PP, ES       |
| 2020-Mendham Township-002 | Ash Tree Mitigation Project                             | Ash trees along hiking trails and township roadways are susceptible to Emerald Ash Borers. Mendham Township has a large amount of ash trees on township property. As a result of Emerald Ash Borer infestation and the proliferation of diseased and dying ash trees, pedestrians, hikers, and motorist are at risk for injury | Develop a community forestry management plan to determine the locations of trees that would be dangerous to people and motorists.  | Existing                | Infestation, Severe Weather, Severe Winter Weather | 1A, 2A, 3G | Township Administrator    | NJUCF, local match, Operating budget | Low                | Low            | Short    | High     | LPR, NSP            | PR, NR       |



| Initiative Number         | Mitigation Initiative Name                              | Description of the Problem   | Description of the Solution   | New or Existing Assets? | Hazard(s) to be Mitigated             | Goals Met      | Lead and Support Agencies                   | Potential Funding Sources  | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|---------------------------|---|--|---|-------------------------|---------------------------------------|----------------|---|--|--------------------|----------------|----------|----------|---------------------|--------------|
|                           |   | and death. In addition, the failure of dying and dead trees create a potential for increased utility interruptions/power failures.   |   |                         |                                       |                |   |  |                    |                |          |          |                     |              |
| 2020-Mendham Township-003 | Generator – Municipal Building (Cooling/Warming Center) | The municipal building which serves as a warming/cooling center for the vulnerable population does not have back-up power. Continuity of operations as well as critical services for the town and vulnerable populations are at high risk of interruption. | The Town Engineer will research the required generator capacity necessary to supply backup power the building. The town will purchase and installation of a generator capable of running the municipal building during an extreme temperatures event as well as during periods of power interruption. | Existing                | Severe Weather, Severe Winter Weather | 3G, 5D         | Town Administrator                          | FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget | Medium             | Medium         | Short    | High     | SIP                 | PP           |
| 2020-Mendham Township-004 | Repetitive Loss Property Program                        | Two repetitive loss properties in the Township experience damages due to flooding.   | Facilitate contact with residents to determine issues and provide options to address issues.  | Existing                | Flood                                 | 1A, 2B, 3A, 4A | NFIP Floodplain Administrator, supported by | FEMA HMGP and FMA, local cost share by residents or Morris   | High               | High           | Short    | High     | SIP                 | PP           |



| Initiative Number         | Mitigation Initiative Name              | Description of the Problem   | Description of the Solution   | New or Existing Assets? | Hazard(s) to be Mitigated | Goals Met  | Lead and Support Agencies | Potential Funding Sources                                     | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|---------------------------|---|--|---|-------------------------|---------------------------|------------|---------------------------|---|--------------------|----------------|----------|----------|---------------------|--------------|
|                           |   |  | Conduct outreach to flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition, relocating, or elevating residential homes in the flood prone areas. |                         |                           |            | homeowners                | County Flood Mitigation Program or NJDEP Green Acres          |                    |                |          |          |                     |              |
| 2020-Mendham Township-005 | Pleasant Valley Road bank stabilization | There are ongoing erosion issues along the bank of the Lake Therese drainage system. | Stabilize the bank of the Lake Therese drainage into the South Raritan River along Pleasant Valley Road. Develop plan and   | Existing                | Flood                     | 2A, 3A, 5A | Town Engineer, DPW        | Highlands Regional Master Plan (RMP) grant funding, FEMA HMA, | Low                | Low            | Short    | Medium   | NSP                 | NR           |



| Initiative Number         | Mitigation Initiative Name                           | Description of the Problem  | Description of the Solution  | New or Existing Assets? | Hazard(s) to be Mitigated           | Goals Met  | Lead and Support Agencies         | Potential Funding Sources  | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|---------------------------|--|---|--|-------------------------|-------------------------------------|------------|-----------------------------------|--|--------------------|----------------|----------|----------|---------------------|--------------|
|                           |  |   | engineering report.  |                         |                                     |            |                                   | Local Operating Budget   |                    |                |          |          |                     |              |
| 2020-Mendham Township-006 | Generator for Elementary school                      | There is no backup power for this critical facility                             | The Town Engineer will research the required generator capacity necessary to supply backup power the building. The town will purchase and installation of a generator capable of running the facility during during periods of power interruption. | Existing                | Severe Storm, Severe Winter Weather | 3G, 5D     | Town Administrator                | FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget | Medium             | Medium         | Short    | High     | SIP                 | PP           |
| 2020-Mendham Township-007 | Stream Mitigation Project                            | Fallen trees obstruct the flow of water in the river                            | Develop River Tree Maintenance Plan for preventive maintenance on trees along the river, including private properties.   | Not applicable          | Flood                               | 2A, 3A, 5A | Town Administrator, Town DPW      | Operating budget   | Low                | Low            | Short    | Medium   | LPR                 | PR           |
| 2020-Mendham Township-008 | Retention Basin Improvement/capacity upgrade (five). | Retention basin capacity is inadequate causing flooding to adjacent properties. | Identifying adjacent properties. Identifying ownership and impact. Identify which  | Existing                | Flood                               | 2A, 3A, 5A | Town Administrator, Town Engineer | Operating budget   | Low                | Low            | Short    | Medium   | NSP                 | NR           |



| Initiative Number          | Mitigation Initiative Name                        | Description of the Problem   | Description of the Solution  | New or Existing Assets? | Hazard(s) to be Mitigated | Goals Met  | Lead and Support Agencies                    | Potential Funding Sources     | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|----------------------------|---|--|--|-------------------------|---------------------------|------------|--|-------------------------------|--------------------|----------------|----------|----------|---------------------|--------------|
|                            |   |  | basis to be addressed.   |                         |                           |            |  |                               |                    |                |          |          |                     |              |
| 2020-Mendham Township-009  | Underground cistern fire hydrants (six).          | Existing street-fed cisterns are undersized for complete coverage of Town                            | Locations for additional to be established. Install sealed units and locate cisterns for complete coverage of Twp.                     | Existing                | Wildfire                  | 2A, 2C, 3A | Town Administrator, Town Engineer            | Operating budget              | Low                | Low            | Short    | High     | SIP                 | SP           |
| 2020-Mendham Township-0010 | Stream Bank stabilization Mosle Road.             | Current development needs to address need for drainage improvements.                                 | Ascertain impact against drainage improvements.  | Existing                | Severe Storm, Flood       | 2A, 3A, 5A | Town Administrator, Town Engineer            | Operating budget              | Low                | Low            | Short    | Medium   | NSP                 | NR           |
| 2020-Mendham Township-0011 | All-Hazards Public Education and Outreach Program | Township sees a need to educate public on the impacts and mitigation methods for hazards of concern. | Develop all-hazards public education and outreach program for hazard mitigation and preparedness. Local OEM to draft outreach program. | Not applicable          | All                       |            | Town Administrator, Mendham Twp School Board | Operating budget, HMA funding | Medium             | Low            | Short    | High     | EAP                 | PI           |
| 2020-Mendham Township-0012 | Master Plan Update                                | The Hazard Mitigation plan is not integrated into the Township Master Plan.                          | Township is currently updating the Master Plan and will include a reference to the HMP and Hazard Maps                                 | N/A                     | All                       | All        | Mendham Township Mayor and Planning Board    | Operating Budget              | High               | Low            | Short    | High     | LPR                 | PR           |
| 2020-Mendham               | Roxiticus Road property protection (storm water)  | Property runoff creates local flooding conditions  | Engineering study, design and implementation   | Existing                | Flood, Severe Storm       | 3G, 5D     | Township Engineer                            | Capital Budget                | Medium             | Medium         | Short    | High     | SIP                 | PP           |



| Initiative Number          | Mitigation Initiative Name   | Description of the Problem  | Description of the Solution   | New or Existing Assets? | Hazard(s) to be Mitigated       | Goals Met | Lead and Support Agencies  | Potential Funding Sources | Estimated Benefits | Estimated Cost | Timeline | Priority | Mitigation Category | CRS Category |
|----------------------------|--|---|---|-------------------------|---------------------------------|-----------|----------------------------|---------------------------|--------------------|----------------|----------|----------|---------------------|--------------|
| Township-0013              | management). Ascertain impact of road alignment.   |   | of a stormwater conveyance system or road realignment.  |                         |                                 |           |                            |                           |                    |                |          |          |                     |              |
| 2020-Mendham Township-0014 | Dam status of Ledell's Dam and Brookrace Dam. Ascertain if updated EAP exists and impact of drainage improvements against dam evaluation | There is potential for catastrophic failure of dams with potential life safety and structure damage.  | Engineering study to determine if updated EAP exists and to ascertain the impact of drainage improvements.  | Existing                | Flood, Severe Storm, Earthquake | 3G, 5D    | Township Engineer          | Operating Budget          | Medium             | Medium         | Short    | High     | SIP, LPR            | PP, PR       |
| 2020-Mendham Township-0014 | Clyde Potts Dam Spillway Improvement   | Visible cracks observed in the dam spillway. Structural damage may result in flooding. Residential areas downstream of dam may get flooded. | NJDEP Dam Safety Division has been currently engaged in a regional study for design flood analysis. Based on the results of the study, site specific study will be performed for the Clyde Potts Dam. The site specific study may require the size of the spillway to be evaluated and upgraded. The spillway design work is anticipated to be performed within 4 to 5 years. | Existing                | Flood, Dam Failure              | 3G, 5D1   | SMCMU A, Township Engineer | HHPD                      | High               | High           | Short    | High     | SIP                 | SP           |



Notes:

Acronyms and Abbreviations:

|      |                                     |
|------|-------------------------------------|
| CAV  | Community Assistance Visit          |
| CRS  | Community Rating System             |
| DPW  | Department of Public Works          |
| FEMA | Federal Emergency Management Agency |
| FPA  | Floodplain Administrator            |
| HMA  | Hazard Mitigation Assistance        |
| N/A  | Not applicable                      |
| NFIP | National Flood Insurance Program    |
| OEM  | Office of Emergency Management      |

Potential FEMA HMA Funding Sources:

|      |   |
|------|---|
| FMA  | Flood Mitigation Assistance Grant Program |
| HMGP | Hazard Mitigation Grant Program           |
| PDM  | Pre-Disaster Mitigation Grant Program     |

Timeline:

The time required for completion of the project upon implementation

Cost:

The estimated cost for implementation.

Benefits:

A description of the estimated benefits, either quantitative and/or qualitative.

**Mitigation Category:**

- *Local Plans and Regulations (LPR)* – These actions include government authorities, policies or codes that influence the way land and buildings are being developed and built.
- *Structure and Infrastructure Project (SIP)* - These actions involve modifying existing structures and infrastructure to protect them from a hazard or remove them from a hazard area. This could apply to public or private structures as well as critical facilities and infrastructure. This type of action also involves projects to construct manmade structures to reduce the impact of hazards.
- *Natural Systems Protection (NSP)* – These are actions that minimize damage and losses and preserve or restore the functions of natural systems.
- *Education and Awareness Programs (EAP)* – These are actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. These actions may also include participation in national programs, such as StormReady and Firewise Communities.

**CRS Category:**

- *Preventative Measures (PR)* - Government, administrative or regulatory actions, or processes that influence the way land and buildings are developed and built. Examples include planning and zoning, floodplain local laws, capital improvement programs, open space preservation, and storm water management regulations.
- *Property Protection (PP)* - These actions include public activities to reduce hazard losses or actions that involve (1) modification of existing buildings or structures to protect them from a hazard or (2) removal of the structures from the hazard area. Examples include acquisition, elevation, relocation, structural retrofits, storm shutters, and shatter-resistant glass.
- *Public Information (PI)* - Actions to inform and educate citizens, elected officials, and property owners about hazards and potential ways to mitigate them. Actions include outreach projects, real estate disclosure, hazard information centers, and educational programs for school-age children and adults.
- *Natural Resource Protection (NR)* - Actions that minimize hazard loss and preserve or restore the functions of natural systems. Actions include sediment and erosion control, stream corridor restoration, watershed management, forest and vegetation management, and wetland restoration and preservation.
- *Structural Flood Control Projects (SP)* - Actions that involve the construction of structures to reduce the impact of a hazard. Structures include dams, setback levees, floodwalls, retaining walls, and safe rooms.
- *Emergency Services (ES)* - Actions that protect people and property during and immediately following a disaster or hazard event. Services include warning systems, emergency response services, and the protection of essential facilities.

**Table 9.21-17. Summary of Evaluation and Action Priority**

| Initiative Number | Mitigation Initiative Name        | Life Safety | Property Protection | Cost Effectiveness | Technical | Political | Legal | Fiscal | Environmental | Social | Administrative | Multi-Hazard | Timeline | Agency Champion | Other Community Initiative | Total | High / Medium / Low |
|-------------------|-----------------------------------|-------------|---------------------|--------------------|-----------|-----------|-------|--------|---------------|--------|----------------|--------------|----------|-----------------|----------------------------|-------|---------------------|
| 2020-Mendham      | Relocation of Police Headquarters | 1           | 1                   | 1                  | 1         | 1         | 1     | 1      | 1             | 1      | 1              | 1            | 1        | 1               | 1                          | 14    | High                |





| Initiative Number         | Mitigation Initiative Name                              | Life Safety | Property Protection | Cost Effectiveness | Technical | Political | Legal | Fiscal | Environmental | Social | Administrative | Multi-Hazard | Timeline | Agency Champion | Other Community Initiatives | Total | High / Medium / Low |
|---------------------------|---|-------------|---------------------|--------------------|-----------|-----------|-------|--------|---------------|--------|----------------|--------------|----------|-----------------|-----------------------------|-------|---------------------|
| Township-001              |   |             |                     |                    |           |           |       |        |               |        |                |              |          |                 |                             |       |                     |
| 2020-Mendham Township-002 | Ash Tree Mitigation Project                             | 1           | 1                   | 1                  | 1         | 1         | 1     | 1      | 1             | 1      | 1              | 1            | 1        | 0               | 1                           | 13    | High                |
| 2020-Mendham Township-003 | Generator – Municipal Building (Cooling/Warming Center) | 1           | 1                   | 1                  | 1         | 1         | 1     | 1      | 0             | 1      | 1              | 1            | 1        | 1               | 0                           | 12    | High                |
| 2020-Mendham Township-004 | Repetitive Loss Property Program                        | 1           | 1                   | 1                  | 1         | 1         | 1     | 0      | 1             | 0      | 0              | 1            | 0        | 1               | 0                           | 9     | High                |
| 2020-Mendham Township-005 | Pleasant Valley Road bank stabilization                 | 1           | 0                   | 1                  | 1         | 0         | 1     | 0      | 1             | 1      | 1              | 0            | 1        | 0               | 0                           | 8     | Medium              |
| 2020-Mendham Township-006 | Generator for Elementary school                         | 1           | 0                   | 1                  | 1         | 1         | 1     | 1      | 0             | 1      | 1              | 1            | 1        | 0               | 0                           | 10    | High                |
| 2020-Mendham Township-007 | Stream Mitigation Project                               | 1           | 0                   | 1                  | 1         | 0         | 1     | 0      | 1             | 1      | 1              | 0            | 1        | 0               | 0                           | 8     | Medium              |
| 2020-Mendham Township-008 | Retention Basin Improvement/capacity upgrade (five).    | 1           | 0                   | 1                  | 1         | 0         | 1     | 0      | 1             | 1      | 1              | 0            | 1        | 0               | 0                           | 8     | Medium              |
| 2020-Mendham Township-009 | Underground cistern fire hydrants (six) upgrade         | 1           | 1                   | 1                  | 1         | 1         | 1     | 1      | 0             | 1      | 1              | 0            | 1        | 1               | 0                           | 11    | High                |
| 2020-Mendham              | Stream Bank stabilization Mosle Road.                   | 1           | 0                   | 1                  | 1         | 0         | 1     | 0      | 1             | 1      | 1              | 0            | 1        | 0               | 0                           | 8     | Medium              |



| Initiative Number          | Mitigation Initiative Name   | Life Safety                                       | Property Protection | Cost Effectiveness         | Technical | Political | Legal | Fiscal                         | Environmental | Social | Administrative | Multi-Hazard | Timeline                       | Agency Champion | Other Community Objectives | Total | High / Medium / Low |
|----------------------------|--|---|---------------------|----------------------------|-----------|-----------|-------|--------------------------------|---------------|--------|----------------|--------------|--------------------------------|-----------------|----------------------------|-------|---------------------|
| Township-0010              |  |   |                     |                            |           |           |       |                                |               |        |                |              |                                |                 |                            |       |                     |
| 2020-Mendham Township-0011 | All-hazards public education and outreach program for hazard mitigation and preparedness.  | 1   | 0                   | 1                          | 1         | 1         | 1     | 1                              | 0             | 1      | 1              | 1            | 1                              | 0               | 1                          | 11    | High                |
| 2020-Mendham Township-0012 | Master Plan Update   | 1   | 1                   | 1                          | 1         | 1         | 1     | 1                              | 1             | 1      | 1              | 1            | 1                              | 1               | 1                          | 14    | High                |
| 2020-Mendham Township-0013 | Roxiticus Road property protection (storm water management). Ascertain impact of road alignment.   | 1 (ability to respond could affect public safety) | 1                   | 1                          | 1         | 1         | 1     | 0 (applying for grant funding) | 1             | 1      | 1              | 1            | 0 (dependent on grant funding) | 1               | 1                          | 12    | High                |
| 2020-Mendham Township-0014 | Dam status of Ledell's Dam and Brookrace Dam. Ascertain if updated EAP exists and impact of drainage improvements against dam evaluation | 0   | 1                   | 1 (assumed cost effective) | 1         | 1         | 1     | 1 (funded project)             | 1             | 1      | 1              | 1            | 1                              | 1               | 1                          | 13    | High – In Progress  |
| 2020-Mendham Township-0014 | Clyde Potts Dam Spillway Improvement   | 1   | 1                   | 1                          | 1         | 1         | 1     | 1                              | 0             | 1      | 1              | 1            | 1                              | 1               | 0                          | 12    | High                |

Notes: Section 6 (Mitigation Strategy) conveys guidance on prioritizing mitigation actions.



Table 9.21-18. Analysis of Mitigation Actions by Hazard and Category

| Hazard                     | Prevention                                   | Property Protection   | Public Education and Awareness               | Natural Resource Protection                           | Emergency Services   | Structural Projects   | Climate Resilient                           | Community Capacity Building                      |
|----------------------------|--|---|--|---|--|---|---|--|
| <b>Dam Failure</b>         | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Disease Outbreak</b>    | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Drought</b>             | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011                        | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011                            |
| <b>Earthquake</b>          | Mendham Township-0014, Mendham Township-0012 | Mendham Township-0014, Mendham Township-0012  | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Extreme Temperature</b> | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011                        | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Flood</b>               | Mendham Township-0014, Mendham Township-0012 | Mendham Township-001, Mendham Township-004, Mendham Township-0012, Mendham Township-0013, Mendham Township-0014 | Mendham Township-0011, Mendham Township-0012 | Mendham Township-005, 007, 008, Mendham Township-0012 | Mendham Township-001, Township-0011, Mendham Township-0012 | Mendham Township-001, Mendham Township-004, Mendham Township-0012, Mendham Township-0013, Mendham Township-0014 | Mendham Township-001, Mendham Township-0012 | Mendham Township-001, 011, Mendham Township-0012 |
| <b>Geological</b>          | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Harmful Algal Bloom</b> | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Hazardous Substance</b> | Mendham Township-0012                        | Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-0011, Mendham Township-0012     |
| <b>Infestation</b>         | Mendham Township-002,                        | Mendham Township-0012   | Mendham Township-0011,                       | Mendham Township-002,                                 | Mendham Township-0012                                      | Mendham Township-0012   | Mendham Township-0012                       | Mendham Township-002, 011,                       |



| Hazard                       | Prevention  | Property Protection   | Public Education and Awareness               | Natural Resource Protection                 | Emergency Services   | Structural Projects                              | Climate Resilient                                | Community Capacity Building                      |
|------------------------------|---|---|--|---|--|--|--|--|
|                              | Mendham Township-0012                                 |   | Mendham Township-0012                        | Mendham Township-0012                       |  |  |  | Mendham Township-0012                            |
| <b>Severe Weather</b>        | Mendham Township-002, 006, 014, Mendham Township-0012 | Mendham Township-003, Mendham Township-0012, Mendham Township-0013, Mendham Township-0014 | Mendham Township-0011, Mendham Township-0012 | Mendham Township-002, Mendham Township-0012 | Mendham Township-003, Township-0011, Mendham Township-0012 | Mendham Township-0014, Mendham Township-0012     | Mendham Township-0012                            | Mendham Township-002, 011, Mendham Township-0012 |
| <b>Severe Winter Weather</b> | Mendham Township-002, 006, Mendham Township-0012      | Mendham Township-003, Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-002, Mendham Township-0012 | Mendham Township-003, Mendham Township-0012                | Mendham Township-0012                            | Mendham Township-0012                            | Mendham Township-002, 011, Mendham Township-0012 |
| <b>Wildfire</b>              | Mendham Township-0012                                 | Mendham Township-0012   | Mendham Township-0011, Mendham Township-0012 | Mendham Township-0012                       | 2020-Mendham Township-009, Mendham Township-0012           | 2020-Mendham Township-009, Mendham Township-0012 | 2020-Mendham Township-009, Mendham Township-0012 | Mendham Township-0011, Mendham Township-0012     |

Note: Section 6 (Mitigation Strategy) provides for an explanation of the mitigation categories.

**RED** = high ranked hazard

**ORANGE** = medium ranked hazard

**YELLOW** = low ranked hazard

### 9.21.8 Staff and Local Stakeholder Involvement in Annex Development

The Township of Mendham followed the planning process described in Section 2 (Planning Process). This annex was developed over the course of several months with input from many jurisdiction representatives. All departments were asked to contribute to the annex development through reviewing and contributing to the capability assessment, reporting on the status of previously identified actions, and participating in action identification and prioritization. The following table summarizes who participated and in what capacity. Additional documentation on the municipality’s planning process through Planning Partnership meetings is included in Section 2 (Planning Process) and Appendix C (Meeting Documentation).

**Table 9.21-19. Contributors to the Annex**

| Entity                               | Title                  | Method of Participation              |
|--------------------------------------|------------------------|--------------------------------------|
| Dennis Keenan/Mendham Twp consultant | Township Engineer, FPA | Local annex meetings                 |
| Ross Johnson                         | Township Police Chief  | Local annex meetings                 |
| David Read, Jr., Twp. DPW            | Superintendent         | Local annex meetings                 |
| Karen Foracio, Mendham Twp           | CFO                    | Local annex meetings                 |
| Deborah Bonanno, Mendham Township    | Township Administrator | Local annex meetings, Data gathering |
| Evan Thomas, Mendham Twp.            | OEM Coordinator        | Local annex meetings                 |
| Sarah Neibart, Mendham Township      | Mayor                  | Local Annex Meetings                 |



Figure 9.21-1. Township of Mendham Hazard Area Extent and Location Map 1

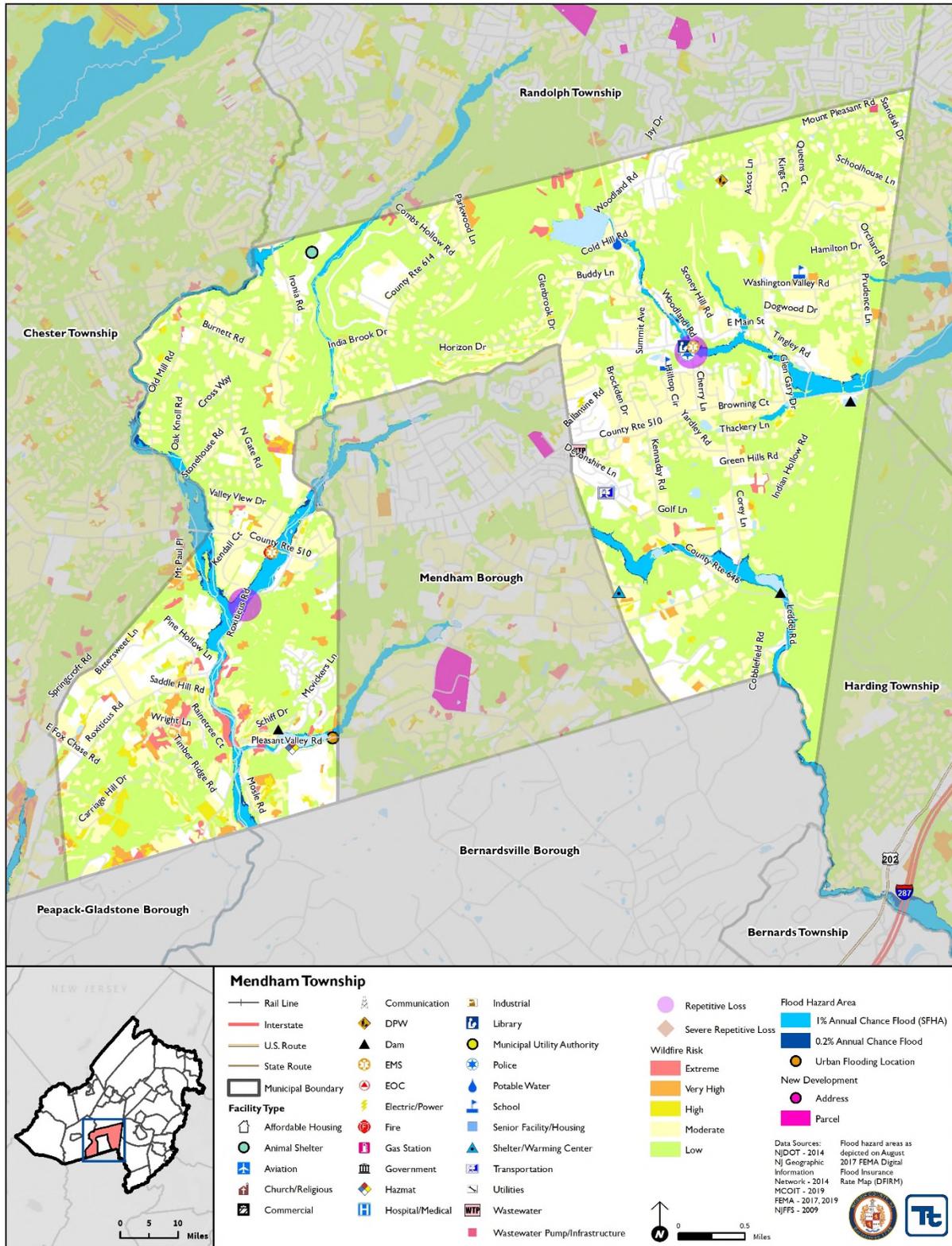
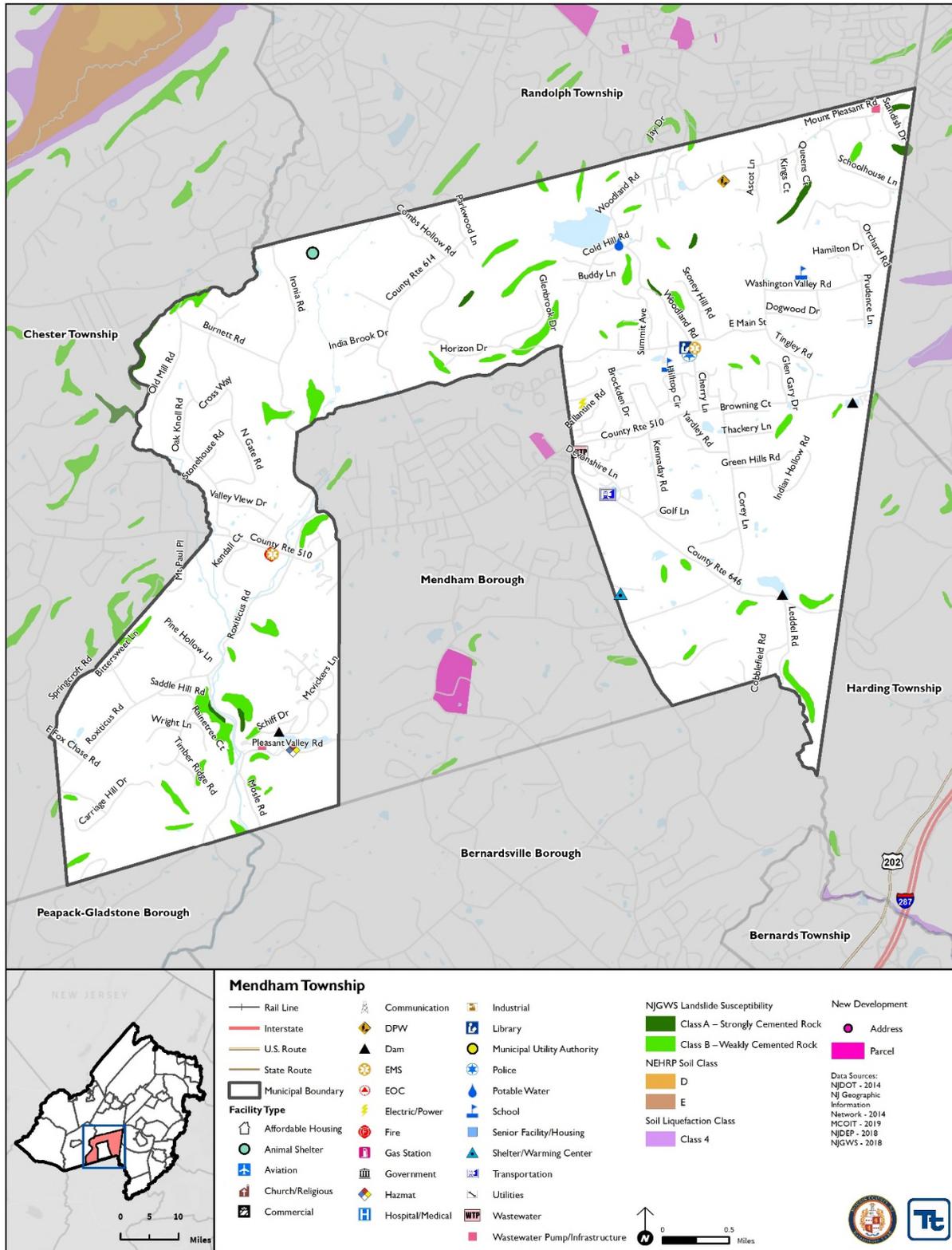




Figure 9.21-2. Township of Mendham Hazard Area Extent and Location Map 2





| Action Worksheet   |  |   |   |
|--|--|---|---|
| <b>Project Name:</b>   | Relocation of Police Headquarters  |   |   |
| <b>Project Number:</b>   | 2020 Mendham Township-001  |   |   |
| Risk / Vulnerability   |  |   |   |
| <b>Hazard(s) of Concern:</b>                                       | Flood  |   |   |
| <b>Description of the Problem:</b>                                 | Police headquarters experiences frequent flooding, inundating the basement and causing equipment and records damage.   |   |   |
| Action or Project Intended for Implementation                      |  |   |   |
| <b>Description of the Solution:</b>                                | Relocate the police headquarters from the current location as the structure is subject to frequent flooding and causes inadequate space due to the limitations caused by the flooding. |   |   |
| <b>Is this project related to a Critical Facility or Lifeline?</b> | Yes <input checked="" type="checkbox"/>  | No <input type="checkbox"/>   |   |
| <b>Level of Protection:</b>  | 500 year flood   | <b>Estimated Benefits (losses avoided):</b>                           | Damages to equipment and archive documents                            |
| <b>Useful Life:</b>  | 100 years  | <b>Goals Met:</b>   | 4A, 5D  |
| <b>Estimated Cost:</b>   | \$3,000,000  | <b>Mitigation Action Type:</b>  | SIP   |
| Plan for Implementation  |  |   |   |
| <b>Prioritization:</b>   | High   | <b>Desired Timeframe for Implementation:</b>                          | 2 years   |
| <b>Estimated Time Required for Project Implementation:</b>         | 12 to 24 months  | <b>Potential Funding Sources:</b>                                     | FEMA HMA, local match   |
| <b>Responsible Organization:</b>                                   | Township Administrator   | <b>Local Planning Mechanisms to be Used in Implementation if any:</b> | Hazard Mitigation Plan, Operating Budget, Capital Improvements Budget |
| Three Alternatives Considered (including No Action)                |  |   |   |
| <b>Alternatives:</b>   | <b>Action</b>  | <b>Estimated Cost</b>   | <b>Evaluation</b>   |
|  | No Action  | \$0   | Problem still continues.  |
|  | Elevation of the facility  | \$900,000   | Not feasible due to structural integrity of the building              |
|  | Relocate the facility  | \$3,000,000   | This is feasible and new location will provide increased resiliency.  |
| Progress Report (for plan maintenance)                             |  |   |   |
| <b>Date of Status Report:</b>                                      |  |   |   |
| <b>Report of Progress:</b>   |  |   |   |
| <b>Update Evaluation of the Problem and/or Solution:</b>           |  |   |   |



| Action Worksheet                  |                                   |   |
|-----------------------------------|-----------------------------------|---|
| <b>Project Name:</b>              | Relocation of Police Headquarters |   |
| <b>Project Number:</b>            | 2020 Mendham Township-001         |   |
| Criteria                          | Numeric Rank (-1, 0, 1)           | Provide brief rationale for numeric rank when appropriate   |
| <b>Life Safety</b>                | 1                                 | This allows the police department to better serve the population with out interruption of services. |
| <b>Property Protection</b>        | 1                                 | This will reduce/prevent flood damages  |
| <b>Cost-Effectiveness</b>         | 1                                 | Grant funding will enable implementation and reduce future damages at this lifeline facility        |
| <b>Technical</b>                  | 1                                 | This is technically feasible  |
| <b>Political</b>                  | 1                                 | There is public and administrative support for this project   |
| <b>Legal</b>                      | 1                                 | The Township has legal authority to implement this project  |
| <b>Fiscal</b>                     | 1                                 | This project is implementable using grant funding and local match                                   |
| <b>Environmental</b>              | 1                                 | This will comply with environmental regulations   |
| <b>Social</b>                     | 1                                 | This action will support all segments of the population   |
| <b>Administrative</b>             | 1                                 | The Township as the administrative capabilities to implement this action                            |
| <b>Multi-Hazard</b>               | 1                                 | This will allow police to better respond to all hazard events without interruption of service.      |
| <b>Timeline</b>                   | 1                                 | This can be completed in less than 5 years with grant award.  |
| <b>Agency Champion</b>            | 1                                 | The mayor is supportive of this project.  |
| <b>Other Community Objectives</b> | 1                                 | This will increase all aspects of community safety.   |
| <b>Total</b>                      | 14                                |   |
| <b>Priority (High/Med/Low)</b>    | High                              |   |



| Action Worksheet   |  |   |  |
|--|--|---|--|
| <b>Project Name:</b>   | Ash Tree Removal   |   |  |
| <b>Project Number:</b>   | 2020 Mendham Township-002  |   |  |
| Risk / Vulnerability   |  |   |  |
| <b>Hazard(s) of Concern:</b>                                       | Infestation, Severe Weather, Severe Winter Weather   |   |  |
| <b>Description of the Problem:</b>                                 | Mendham Township has a large amount of ash trees on township property. As a result of Emerald Ash Borer infestation and the proliferation of diseased and dying ash trees, pedestrians, hikers, and motorist are at risk for injury and death. In addition, the failure of dying and dead trees create a potential for increased utility interruptions/power failures. |   |  |
| Action or Project Intended for Implementation                      |  |   |  |
| <b>Description of the Solution:</b>                                | Develop a community forestry management plan to determine the locations of trees that would be dangerous to people and motorists.  |   |  |
| <b>Is this project related to a Critical Facility or Lifeline?</b> | Yes <input type="checkbox"/>   | No <input checked="" type="checkbox"/>                                |  |
| <b>Level of Protection:</b>  | Not applicable   | <b>Estimated Benefits (losses avoided):</b>                           | Reduce the potential of death and injury from dying and failing ash trees. Improve continuity of operations by reducing incidence of interruption of power and blockage of emergency routes due to fallen trees. |
| <b>Useful Life:</b>  | Not applicable   | <b>Goals Met:</b>   | 1A, 2A, 3G   |
| <b>Estimated Cost:</b>   | <\$100,000   | <b>Mitigation Action Type:</b>  | LPR, NSP   |
| Plan for Implementation  |  |   |  |
| <b>Prioritization:</b>   | High   | <b>Desired Timeframe for Implementation:</b>                          | 2021   |
| <b>Estimated Time Required for Project Implementation:</b>         | 12 - 18 months   | <b>Potential Funding Sources:</b>                                     | NJUCF, local match, Operating budget   |
| <b>Responsible Organization:</b>                                   | Township Administrator   | <b>Local Planning Mechanisms to be Used in Implementation if any:</b> | Hazard Mitigation Plan, Operating budget   |
| Three Alternatives Considered (including No Action)                |  |   |  |
| <b>Alternatives:</b>   | <b>Action</b>  | <b>Estimated Cost</b>   | <b>Evaluation</b>  |
|  | No Action  | \$0   |  |
|  | Create a management plan and remove selected trees   | <\$100,000  | This provides a focused and implementable action plan.   |
|  | Inoculate trees  | \$500 per tree  | Cost prohibitive and may not be effective  |
| Progress Report (for plan maintenance)                             |  |   |  |
| <b>Date of Status Report:</b>                                      |  |   |  |
| <b>Report of Progress:</b>   |  |   |  |
| <b>Update Evaluation of the Problem and/or Solution:</b>           |  |   |  |



| Action Worksheet                  |                           |   |
|-----------------------------------|---------------------------|---|
| <b>Project Name:</b>              | Ash Tree Removal          |   |
| <b>Project Number:</b>            | 2020-Mendham Township-002 |   |
| Criteria                          | Numeric Rank (-1, 0, 1)   | Provide brief rationale for numeric rank when appropriate                                 |
| <b>Life Safety</b>                | 1                         | Increases life safety by reducing potential for injury and death                          |
| <b>Property Protection</b>        | 1                         | Reduces damages to property and utilities   |
| <b>Cost-Effectiveness</b>         | 1                         | The costs are commensurate with the benefits  |
| <b>Technical</b>                  | 1                         | This is technically feasible and a long term solution.                                    |
| <b>Political</b>                  | 1                         | This has support from the town administration.  |
| <b>Legal</b>                      | 1                         | The Township has authority to implement this project.                                     |
| <b>Fiscal</b>                     | 1                         | Can be implemented with grant funding and local operating budget                          |
| <b>Environmental</b>              | 1                         | This will comply with environmental regulations   |
| <b>Social</b>                     | 1                         | This will benefit all sectors of the population   |
| <b>Administrative</b>             | 1                         | The town has the administrative capability to implement this project.                     |
| <b>Multi-Hazard</b>               | 1                         | Also addresses cascading impacts of the Severe Weather and Severe Winter Weather hazards. |
| <b>Timeline</b>                   | 1                         | This can be implemented in less than 5 years  |
| <b>Agency Champion</b>            | 0                         |   |
| <b>Other Community Objectives</b> | 1                         | This supports general welfare of residents.   |
| <b>Total</b>                      | 12                        |   |
| <b>Priority (High/Med/Low)</b>    | High                      |   |



| Action Worksheet   |   |   |  |
|--|---|---|--|
| <b>Project Name:</b>   | Generator – Municipal Building (Cooling/Warming Center)   |   |  |
| <b>Project Number:</b>   | 2020 Mendham Township-003   |   |  |
| Risk / Vulnerability   |   |   |  |
| <b>Hazard(s) of Concern:</b>                                       | Utility Interruption, Severe Weather, Severe Winter Weather   |   |  |
| <b>Description of the Problem:</b>                                 | The municipal building which serves as a warming/cooling center for the vulnerable population does not have back-up power. Continuity of operations as well as critical services for the town and vulnerable populations are at high risk of interruption.                                      |   |  |
| Action or Project Intended for Implementation                      |   |   |  |
| <b>Description of the Solution:</b>                                | The Town Engineer will research the required generator capacity necessary to supply backup power the building. The town will purchase and installation of a generator capable of running the municipal building during an extreme temperatures as well as during periods of power interruption. |   |  |
| <b>Is this project related to a Critical Facility or Lifeline?</b> | Yes <input checked="" type="checkbox"/>   | No <input type="checkbox"/>   |  |
| <b>Level of Protection:</b>  | Not applicable  | <b>Estimated Benefits (losses avoided):</b>                           | Ensures continuity of operations; provides a warming/cooling center for residents  |
| <b>Useful Life:</b>  | 10-15 years   | <b>Goals Met:</b>   | 3G, 5D   |
| <b>Estimated Cost:</b>   | \$100,000+  | <b>Mitigation Action Type:</b>  | SIP  |
| Plan for Implementation  |   |   |  |
| <b>Prioritization:</b>   | High  | <b>Desired Timeframe for Implementation:</b>                          | 2021   |
| <b>Estimated Time Required for Project Implementation:</b>         | 12 – 24 months  | <b>Potential Funding Sources:</b>                                     | FEMA HMGP and PDM, USDA Community Facilities Grant Program, Emergency Management Performance Grants (EMPG) Program, Municipal Budget |
| <b>Responsible Organization:</b>                                   | Township Administrator  | <b>Local Planning Mechanisms to be Used in Implementation if any:</b> | Hazard Mitigation, Emergency Management  |
| Three Alternatives Considered (including No Action)                |   |   |  |
| Alternatives:  | Action  | Estimated Cost  | Evaluation   |
|  | No Action   | \$0   | Problem continues.   |
|  | Install Solar Panels  | \$100,000   | Weather dependent; need large amount of space for installation; expensive if repairs needed  |
|  | Move administration of the town to the emergency services building during hazard events but this would not allow all the municipal departments to operate.  | \$25,000  | This is a temporary solution which does not provide complete continuity of operations and hence, is not feasible.                    |
| Progress Report (for plan maintenance)                             |   |   |  |
| <b>Date of Status Report:</b>                                      |   |   |  |
| <b>Report of Progress:</b>   |   |   |  |
| <b>Update Evaluation of the Problem and/or Solution:</b>           |   |   |  |



| Action Worksheet                  |   |   |
|-----------------------------------|---|---|
| <b>Project Name:</b>              | Generator – Municipal Building (Cooling/Warming Center) |   |
| <b>Project Number:</b>            | 2020 Mendham Township-003                               |   |
| Criteria                          | Numeric Rank<br>(-1, 0, 1)                              | Provide brief rationale for numeric rank when appropriate   |
| <b>Life Safety</b>                | 1   | Project will support uninterrupted operation of the Municipal Building/Administration and provide a warming/cooling center for residents. |
| <b>Property Protection</b>        | 1   | Project will protect the Municipal Building from power loss.  |
| <b>Cost-Effectiveness</b>         | 1   | Cost is commensurate with life safety benefits.   |
| <b>Technical</b>                  | 1   | This is a technically feasible solution.  |
| <b>Political</b>                  | 1   | Administration is supportive of this effort.  |
| <b>Legal</b>                      | 1   | The town has the legal authority to implement this project.   |
| <b>Fiscal</b>                     | 1   | This can be funded with grant award.  |
| <b>Environmental</b>              | 0   |   |
| <b>Social</b>                     | 1   | This supports all segments of the population.   |
| <b>Administrative</b>             | 1   | The administration has the capacity to implement this project.  |
| <b>Multi-Hazard</b>               | 1   | This supports power interruptions due to multiple hazard events.  |
| <b>Timeline</b>                   | 1   | This can be implemented in less than 5 years.   |
| <b>Agency Champion</b>            | 1   | Town Administrator  |
| <b>Other Community Objectives</b> | 0   |   |
| <b>Total</b>                      | 12  |   |
| <b>Priority (High/Med/Low)</b>    | High  |   |



| Action Worksheet   |  |   |   |
|--|--|---|---|
| <b>Project Name:</b>   | Repetitive Loss Property Program   |   |   |
| <b>Project Number:</b>   | 2020 Mendham Township-004  |   |   |
| Risk / Vulnerability   |  |   |   |
| <b>Hazard(s) of Concern:</b>                                       | Flood  |   |   |
| <b>Description of the Problem:</b>                                 | Two repetitive loss properties in the Township experience damages due to flooding.   |   |   |
| Action or Project Intended for Implementation                      |  |   |   |
| <b>Description of the Solution:</b>                                | Facilitate contact with residents to determine issues and provide options to address issues. Conduct outreach to flood-prone property owners, including RL/SRL property owners and provide information on mitigation alternatives. After preferred mitigation measures are identified, collect required property-owner information and develop a FEMA grant application and BCA to obtain funding to implement acquisition, relocating, or elevating residential homes in the flood prone areas. |   |   |
| <b>Is this project related to a Critical Facility or Lifeline?</b> | Yes <input type="checkbox"/>   | No <input checked="" type="checkbox"/>                                |   |
| <b>Level of Protection:</b>  | 1% annual chance flood event + freeboard ( <i>in accordance with flood ordinance</i> )   | <b>Estimated Benefits (losses avoided):</b>                           | Reduces or eliminates flood damage to homes and residents.  |
| <b>Useful Life:</b>  | Acquisition: Lifetime<br>Elevation: 30 years (residential)   | <b>Goals Met:</b>   | 1A, 2B, 3A, 4A  |
| <b>Estimated Cost:</b>   | \$700,000  | <b>Mitigation Action Type:</b>  | SIP   |
| Plan for Implementation  |  |   |   |
| <b>Prioritization:</b>   | High   | <b>Desired Timeframe for Implementation:</b>                          | 1 year  |
| <b>Estimated Time Required for Project Implementation:</b>         | Three years  | <b>Potential Funding Sources:</b>                                     | FEMA HMGP and FMA, local cost share by residents or Morris County Flood Mitigation Program or NJDEP Green Acres |
| <b>Responsible Organization:</b>                                   | NFIP Floodplain Administrator, supported by homeowners   | <b>Local Planning Mechanisms to be Used in Implementation if any:</b> | Hazard Mitigation Plan  |
| Three Alternatives Considered (including No Action)                |  |   |   |
| <b>Alternatives:</b>   | <b>Action</b>  | <b>Estimated Cost</b>   | <b>Evaluation</b>   |
|  | No Action  | \$0   | Current problem continues   |
|  | Elevate homes  | \$700,000   | This would reduce the flood damage claims as well as the impacts on life safety and economy of the residents.   |
|  | Elevate roads  | \$500,000   | Elevated roadways would not protect the homes from flood damages  |
| Progress Report (for plan maintenance)                             |  |   |   |
| <b>Date of Status Report:</b>                                      |  |   |   |
| <b>Report of Progress:</b>   |  |   |   |
| <b>Update Evaluation of the Problem and/or Solution:</b>           |  |   |   |



| Action Worksheet               |                                  |   |
|--------------------------------|----------------------------------|---|
| <b>Project Name:</b>           | Repetitive Loss Property Program |   |
| <b>Project Number:</b>         | 2020 Mendham Township - 004      |   |
| Criteria                       | Numeric Rank<br>(-1, 0, 1)       | Provide brief rationale for numeric rank when appropriate                       |
| Life Safety                    | 1                                | Families removed moved from high-risk flood areas.                              |
| Property Protection            | 1                                | Properties removed or elevated out of high-risk flood areas.                    |
| Cost-Effectiveness             | 1                                | Cost-effective project  |
| Technical                      | 1                                | Technically feasible project  |
| Political                      | 1                                |   |
| Legal                          | 1                                | The Township has the legal authority to conduct the project.                    |
| Fiscal                         | 0                                | Project will require grant funding.   |
| Environmental                  | 1                                |   |
| Social                         | 0                                | Project would reduce or eliminate flood vulnerability of floodprone properties. |
| Administrative                 | 0                                |   |
| Multi-Hazard                   | 1                                | Flood, Severe Storm   |
| Timeline                       | 0                                |   |
| Agency Champion                | 1                                | NFIP Floodplain Administrator, supported by homeowners                          |
| Other Community Objectives     | 0                                |   |
| <b>Total</b>                   | 9                                |   |
| <b>Priority (High/Med/Low)</b> | High                             |   |



| Action Worksheet   |   |   |  |
|--|---|---|--|
| <b>Project Name:</b>   | Clyde Potts Dam Spillway Improvement  |   |  |
| <b>Project Number:</b>   | 2020-Mendham Township-014   |   |  |
| Risk / Vulnerability   |   |   |  |
| <b>Hazard(s) of Concern:</b>                                       | High Hazard Dam, Structural damage to spillway, spillway capacity concerns.   |   |  |
| <b>Description of the Problem:</b>                                 | Visible cracks observed in the dam spillway. Structural damage may result in flooding. Residential areas downstream of dam may get flooded.   |   |  |
| Action or Project Intended for Implementation                      |   |   |  |
| <b>Description of the Solution:</b>                                | NJDEP Dam Safety Division has been currently engaged in a regional study for design flood analysis. Based on the results of the study, site specific study will be performed for the Clyde Potts Dam. The site specific study may require the size of the spillway to be evaluated and upgraded. The spillway design work is anticipated to be performed within 4 to 5 years. |   |  |
| <b>Is this project related to a Critical Facility or Lifeline?</b> | Yes   | X   | No <input type="checkbox"/>  |
| <b>Level of Protection:</b>  | To be determined  | <b>Estimated Benefits (losses avoided):</b>                           | High   |
| <b>Useful Life:</b>  | 50 years  | <b>Goals Met:</b>   | 3G, 5D   |
| <b>Estimated Cost:</b>   | \$2,000,000   | <b>Mitigation Action Type:</b>  | SIP  |
| Plan for Implementation  |   |   |  |
| <b>Prioritization:</b>   | HIGH  | <b>Desired Timeframe for Implementation:</b>                          | 6 to 12 months   |
| <b>Estimated Time Required for Project Implementation:</b>         | 4 to 5 years  | <b>Potential Funding Sources:</b>                                     | HHPD   |
| <b>Responsible Organization:</b>                                   | SMCMUA  | <b>Local Planning Mechanisms to be Used in Implementation if any:</b> | Hazard Mitigation Plan   |
| Three Alternatives Considered (including No Action)                |   |   |  |
| <b>Alternatives:</b>   | <b>Action</b>   | <b>Estimated Cost</b>   | <b>Evaluation</b>  |
|  | No Action   | \$0   | Current problem continues  |
|  | Spillway Rehabilitation   | \$2,000,000   | Spillway repair will reduce risk of dam failure and potential loss of life/property for areas downstream |
|  | Decommission dam  | Undetermined.   | Not feasible as alternate source is not available.   |
| Progress Report (for plan maintenance)                             |   |   |  |
| <b>Date of Status Report:</b>                                      |   |   |  |
| <b>Report of Progress:</b>   |   |   |  |
| <b>Update Evaluation of the Problem and/or Solution:</b>           |   |   |  |



| Action Worksheet               |                                      |  |
|--------------------------------|--------------------------------------|--|
| <b>Project Name:</b>           | Clyde Potts Dam Spillway Improvement |  |
| <b>Project Number:</b>         | 2020 Mendham Township - 014          |  |
| Criteria                       | Numeric Rank (-1, 0, 1)              | Provide brief rationale for numeric rank when appropriate  |
| Life Safety                    | 1                                    | This will reduce or eliminate potential injuries from dam failure.   |
| Property Protection            | 1                                    | This will reduce or eliminate potential damages to structures due to dam failure.  |
| Cost-Effectiveness             | 1                                    | Cost-effective project   |
| Technical                      | 1                                    | Technically feasible project   |
| Political                      | 1                                    | There is political will to support   |
| Legal                          | 1                                    | The Township has the legal authority to conduct the project.   |
| Fiscal                         | 1                                    | Project will require grant funding.  |
| Environmental                  | 0                                    |  |
| Social                         | 1                                    | This action will not adversely affect one segment of the population and will not disrupt established neighborhoods, break up voting districts, or cause the relocation of lower income people. |
| Administrative                 | 1                                    | The SMCMUA has the personnel and administrative capabilities to implement the action and maintain it   |
| Multi-Hazard                   | 1                                    | Flood, Dam Failure   |
| Timeline                       | 1                                    | Can be implemented in 4-5 years.   |
| Agency Champion                | 1                                    |  |
| Other Community Objectives     | 0                                    |  |
| <b>Total</b>                   | 12                                   |  |
| <b>Priority (High/Med/Low)</b> | High                                 |  |